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Psychological Abstracts

EDITED BY

WALTER S. HUNTER, Clark University

RAYMOND R. WILLOUGHBY (*Assistant Editor*)
Clark University

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PSYCHOLOGICAL ABSTRACTS

VOLUME II, No. 12 DECEMBER, 1928

GENERAL

3339. **Boring, E. G. Psychological necrology.** *Psychol. Bull.*, 1928, **25**, 302-305.—A list of deaths of psychologists within the past twenty-five years.—*J. F. Dashiell* (North Carolina).

3340. **Brett, G. S. Psychology ancient and modern.** New York: Longmans, Green, 1928. Pp. ix + 164. $1.75.—A sympathetic analysis of the outstanding psychological theories of Greece and Rome which have given birth to the classical tradition in modern psychology. The book has five major divisions: General Psychology, Psychology of Conduct, Applied Psychology, Hellenistic Thought, and The Great Tradition. More than half is concerned with a discussion of Plato and Aristotle and their contribution to general and applied psychology. A bibliography of 36 titles is appended.—*N. L. Munn* (Clark).

3341. **Brierley, S. S. An introduction to psychology.** London: Methuen & Co., 1928. Pp. vii + 160. 5s.—The fourth edition of this popular text-book contains minor revisions, additional footnotes and an expansion of the section dealing with the content of the unconscious. A new appendix giving a brief account of the work of the *Gestalt* school, of Spearman and his pupils, of the stricter behaviorist school, and of recent developments in psychoanalytic theory has been added.—*F. C. Bartlett* (Cambridge, England).

3342. **Brownell, B. The new universe.** New York: Van Nostrand, 1927. Pp. 455. $4.00.—*W. S. Hunter* (Clark).

3343. **Clendening, L. The human body.** London: Knopf, 1927. Pp. 421. 25/.—*W. S. Hunter* (Clark).

3344. **Dashiell, J. F. Fundamentals of objective psychology.** New York: Houghton, Mifflin, 1928. Pp. xviii + 588. $3.00.—"While the treatment offered in this book is that of a consistent objectivism, I have not intended to imply an antagonism to the employment of an introspective approach where the teacher wishes to supply it. On certain phases of the subject indeed, where the processes involved are especially subtle and intricate, their accurate determination as physical processes may be actually furthered by the subject's effort to observe and report them." Eighteen chapters present the account, largely in terms of experimental material. Separate chapters are devoted to the following topics, not often so treated: the effectors, motivation, postural responses, and discriminating and generalizing. The volume ends with chapters on thinking and personality. Material from the various fields of psychology is utilized as required to illustrate and elaborate the various problems considered. The following quotation from the chapter on thinking will serve to illustrate the author's attitude on several important problems: "In these different cases [of thinking] the only satisfying description of what goes on in the organism is in terms of *responses that are set up and that serve in turn as stimuli. Inorganic reactions now operate as cues.* As a formula it would read, 'S—implicit R (S)—R.' . . . . Emotion, we have seen, is an intraorganic reacting of a sort that in turn influences and determines overt behavior. Attending is primarily a response that prepares for and facilitates overt reactions of particular sorts. And in perceiving, the subject is thrown by some aspect of a situation into some anticipatory set (largely implicit) that orients him for a certain line of conduct with reference to that situation. In thinking, then, a situation arouses some implicit reaction and that reaction in turn arouses a new implicit reaction, and sooner or later the implicit reaction

arouses overt behavior." References at the close of each chapter.—*W. S. Hunter* (Clark).

3345. **Fernberger, S. W. The first psychological laboratory at the University of Pennsylvania.** *Psychol. Bull.*, 1928, **25**, 445.—Two photographs with an accompanying note.—*J. F. Dashiell* (North Carolina).

3346. **Komora, P. O. Thomas W. Salmon: friend of the mentally wounded American soldier.** *Welfare Mag.*, 1928, **19**, 956–964.—An account is given of the labors of the late Dr. Salmon, psychiatrist, in bringing about governmental care of the mentally disabled ex-service men.—*L. Ackerson* (Institute for Juvenile Research).

3347. **Lindley, S. B. An electro-kymograph used in recording vaso-motor changes.** *J. Exper. Psychol.*, 1928, **11**, 325–328.—A set of Ford coils "actuated by a current transformed and reduced from an ordinary alternating wall circuit" produces a high tension spark which burns small holes in a roll of paper passed over the drum. One electrode is the tambour lever; the other, the kymograph drum.—*S. Renshaw* (Ohio State).

3348. **Miles, W. Studies of physical exertion: I. A multiple chronograph for measuring groups of men.** *Amer. Phys. Educ. Rev.*, 1928, **33**, 379–387.—A multiple chronograph is described which makes possible the simultaneous recording of seven events, such as the reactions of seven men to an auditory stimulus. The recording surface is a revolving wooden drum covered with paper stretched over a wire drum. Registration of signal and reactions is by means of gravity. Golf balls are released and fall upon the revolving drums, pressing the paper against the screen and thus embossing marks upon it.—*R. Stone* (Clark).

3349. **Miles, W. R. British scientific instruments.** *Psychol. Bull.*, 1928, **25**, 480–486.—Appearing in the first two volumes of the *Journal of Scientific Instruments* (Cambridge University Press) are a number of articles describing new apparatus of interest to psychologists. They include pieces for visual, auditory, and thermal stimulation, for timing photographic, kymographic, and other recordings, and some miscellaneous electrical apparatus.—*J. F. Dashiell* (North Carolina).

3350. **Narazaki, A. Problemoj de moderna psikologio.** (Problems of modern psychology.) *Revuo Kultura*, 1928, **1**, 1–5.—Digest of an article originally appearing in *Tecugaku-Kooza*. The author discusses the recent history, problems, methods and viewpoints of psychological theory. 5 references.—*R. R. Willoughby* (Clark).

3351. **Peterson, E. N. A vacuum tube technique for the frequency range of phase effect.** *Psychol. Monog.*, 1928, **38**, No. 4. *Univ. Iowa Stud. Psychol.*, No. XI.—An audio-frequency current generated by the heterodyning system was used in the study of phase effect in sound localization. There is a phase effect within the range from 10 to 8,192 cycles which can be recognized by both trained and untrained observers.—*F. A. C. Perrin* (Texas).

3352. **Peterson, H. Havelock Ellis, philosopher of love.** Boston: Houghton, Mifflin, 1928. Pp. 441. $4.50.—*W. S. Hunter* (Clark).

3353. **Politzer, G. Critique des fondements de la psychologie.** (Critique of the fundamentals of psychology.) Paris: Riéder, 1928. Pp. 270. 20 fr.—This is the first volume of a contribution directed toward a new orientation in psychology. It will comprise three parts, the first treating of psychoanalysis, and the second and third of *Gestalt* theory and behaviorism. The three volumes will make up a whole entitled *Materials for the Critique of the Fundamentals of Psychology*, the first part being a personal exposé. The first volume, the only one which has yet appeared, contains harsh criticism of scientific psychology, which the author declares is a disgrace to the scientific spirit; psychologists, he says, are scientists in the same way that evangelized

savages are Christians. There are in contemporary psychology some facts which will survive, but their true significance can be brought out only by the new psychology. Dramatic human life, as a purely biological fact without affective implications, has never been viewed by psychologists. It is only psychoanalysis which has approached such a view, and it was by reflecting upon psychoanalysis that the author perceived the true psychology. This new psychology will study the real man; up to the present there has been only a metapsychology. Five chapters compose the volume and treat successively the following questions: psychological discoveries in psychoanalysis and the orientation toward the concrete; classical introspection and the psychoanalytic method; the theoretical framework of psychoanalysis and the survival of abstraction; the hypothesis of the unconscious and concrete psychology; the dualism of the abstract and the concrete in psychoanalysis and the problem of concrete psychology; the values of concrete psychology and the problems to which it gives rise. It is from the concrete character of Freudian analysis that the author takes his point of departure for the desiderata of the new psychology. There should be (1) an *a posteriori* science, i.e., an adequate study of a group of facts, (2) an original science, i.e., one which studies facts which are irreducible to the objects studied by other sciences, (3) an objective science defining psychological fact and method in such a way that they become in fact universally accessible and verifiable.—*Math. H. Piéron* (Sorbonne).

3354. **Ruckmick, C. A. German-English dictionary of psychological terms.** Iowa City: Athens Press, 1928. Pp. 45. $0.75.—The author, in addition to presenting words of his own choosing, has made particular use of the list in Judd's translation of Wundt's *Outlines* and of the list prepared by Titchener, *Amer. J. Psychol.*, 1895, **7**, 78–85. Reference was also made to Supplement No. I of the *Int. J. Psychoanal.*, 1924, and to F. Geise's *Psychologisches Wörterbuch*, Berlin, 1921.—*W. S. Hunter* (Clark).

3355. **Schafer, E. A. S. Experimental physiology.** (4th Ed.) New York: Longmans, Green, 1927. Pp. 146. $2.00.—*W. S. Hunter* (Clark).

3356. **Shastri, P. D. Elementary psychology.** London: Longmans, Green, 1928. Pp. xi + 156. 4/6.—This elementary text-book was designed to meet the requirements of the intermediate students of the Punjab University. It affords an introduction to the study of the principal problems of psychology by means of a series of definitions and clearly laid down propositions, but avoids most controversial matter. The treatment of sensation, perception, feeling, attention, and memory is much fuller than that of the more complex subjects of instinct, emotion, and volition; but the chapter on thought and language is fairly detailed. There are brief appendices on the mind-body relationship, the James-Lange theory, and theories of instinct.—*M. D. Vernon* (Cambridge, England).

3357. **Stearns, A. W. Morton Prince.** *Int. Zsch. f. Indiv.-psychol.*, 1928, 6, 1-2.—An appreciation of Morton Prince and his contributions to the understanding of psychopathology.—*K. M. Cowdery* (Stanford).

3358. **Troland, L. T. The fundamentals of human motivation.** New York: Van Nostrand, 1928. Pp. xiv + 521. $5.00.—In this book there is offered for the first time a comprehensive and systematic arrangement of the problems and facts of motivation. The approach is that of psychophysical parallelism. The author, avoiding the extremes of behaviorism and introspectionism, formulates a doctrine called "the theory of retroflex action" which embraces many of the principles of each of these systems, agrees with the essential truths of the older psychological ideas, and explains many hitherto puzzling facts. Primary retroflex action consists in the increasing or decreasing of the operative, or recently operated, cortical adjustors as a consequence of the

direct excitation of beneceptive or nociceptive nerve channels, respectively. This device furnishes an instrument for the fundamental process of learning by trial and error. Primitive appetitions rest upon the action of these primary retroflexes. Conditioned retroflexes result in built-up sentiments and complexes, which explain so-called instincts. Pleasantness accompanies increasing conductance; unpleasantness, decreasing. Affectivity, or the degree of pleasantness-unpleasantness, is the key to motivation on the purely psychological side. This doctrine of "hedonism of the past" implies that the historical basis of reacting is to be found in the integration of past happinesses. The discovery of the identity of ultimate happiness, or the "dominant desideratum" is the problem of "complete technology." The latter term is used as a substitute for ethics. Some of the specific topics which are analyzed in detail are: typical emotional experiences; purposes, complexes, especially the ego complex; sexual motivation; conflict of motives; modern interests, such as automobile and radio; personality. There is an extensive bibliography and a glossary which is made necessary by the introduction of some unusual terms.—*M. P. Montgomery* (Faribault, Minn.).

3359. **Vischer, R. Drei Schriften zum ästhetischen Formproblem 1872, 1874, 1890.** (Three essays on the problem of esthetic form.) In Rothacker's *Philosophie und Geisteswissenschaften*, Vol. 6. Halle: Niemeyer, 1927.—Friedrich Theodor Vischer confronted the Herbartians with the concept of *der unterlegte Lebensanschein blosser Formen.* Later his son Robert took up the more subjective sides of this concept. In these three essays he shows how imagination fuses its own life-feeling with the visualized form. He differentiates three functions in this act. First, there is the mere *Zufühlung*, that is, only sensory visualization where the nerve stimulation is transformed into a psychic one so that an illusory reflection of one's own mood appears. Second, there is the motor visualization, where with the visual movement the imaginative self moves *nachfühlend* around the periphery of the phenomenon and thus there arises an illusion as if the visual path were itself moving. Third, we have the *Einfühlung*, the central transposition of self where the psycho-sensual self of the observer experiences the form from within as behavior of his own personality. While the author was working out this concept he was greatly aided by Karl Albert Scherner's proof of the "symbolic basal formations for dreams occasioned by sensory stimulation." He relegates the association of ideas to second place. Two chapters deal with art.—*R. Vischer* (Vienna).

3360. **Woods, C. A. Human analysis; the practical and scientific method of reading people at sight.** San Francisco: Blanchard Press, 1927. Pp. 286. $7.50.—*W. S. Hunter* (Clark).

3361. **Zwirner, E. Beschreibung einer Apparatur zur Fixierung und Wiedergabe von Explorationen.** (Description of an apparatus for fixation and reproduction of explorations.) *Arch. f. Psychiat. u. Nervenkr.*, 1927, **82**, 121.—A microphone and phonograph for recording the words spoken by the patient, and the inflection of his voice.—*W. Craig* (Harvard).

[See also abstracts 3403, 3504, 3656, 3730.]

SENSATION AND PERCEPTION

3362. **Cobb, P. W., & Moss, F. K. The four variables of the visual threshold.** *J. Franklin Institut.*, 1928, **205**, 831–847.—The authors have extended their investigation of the conditions under which a test object just becomes visible. They find that the values of at least four variables must be given, and present data which evaluate the interrelation of them between the limits indi-

cated: (1) object brightness (1 to 100 millilamberts); (2) ratio of difference between object brightness and background brightness to background brightness, contrast ratio so-called (0.01 to 0.70); (3) size of object (0.8 to 16 minutes in visual angle); and (4) exposure time (75 to 300 sigma). In general, the relation between these variables is such that a deficiency in one may be compensated by augmentation of the others.—*D. B. Judd* (Bureau of Standards).

3363. **Coque, M. Introduction to the study of the anatomy and physiology of the eye.** 2 vols. New York: Stechert, 1927. Pp. 467. $9.00.—*W. S. Hunter* (Clark).

3364. **Goebel, O. Subjektive Vertiefung eines dem Labyrinth zugeleiteten einfachen Stimmgabeltones.** (Subjective lowering of a simple tone from a tuning fork when conducted to the labyrinth.) *Arch. f. Ohrenk.*, 1927, **116**, 42–55.—The author has demonstrated experimentally a very distinct lowering of tones conducted directly to the labyrinth. This fact, he believes, supports certain ideas regarding the act of hearing. Especially worthy of the attention of psychologists is the remark: "That such tones are regularly heard higher than their true pitch . . . is connected with the fact that the isolated tone is a matter of indifference to musicians and music-lovers, with some exceptions. Their attention is directed to the mental effect of clangs and of succession of clangs."—*W. Wirth* (Leipzig).

3365. **Hauge, I. B. The application of phi-phenomena to beats.** *Psychol. Monog.*, 1928, **38**, No. 4. *Univ. Iowa Stud. Psychol.*, No. XI.—The author investigates the possibility of interpreting the beating intertone in terms of the phi-phenomenon. Two electrically driven tuning forks of 256 and 244 d.v. were used with a rheostat in the circuit of each fork to control the intensities. The phi-phenomenon is not applicable to the perception of beats, since there was no direct perception of auditory movement in terms of pitch.—*F. A. C. Perrin* (Texas).

3366. **Kingman, R. Color psychology; a study of the combined esthesias.** *Welfare Mag.*, 1928, **19**, 900–906.—Several types of synesthesia are described and four theories (embryological, anatomical, physiological and psychological) discussed.—*L. Ackerson* (Institute for Juvenile Research).

3367. **Leisse, —. Raumwahrnehmung und Vestibularapparat. Bemerkungen zu obiger Arbeit von Noltenius.** (Space perception and vestibular apparatus. Remarks on the preceding paper by Noltenius.) *Arch. f. Ohrenk.*, 1927, **117**, 62–66.—(See II: 3368.) Leisse points out the difference between space sensation and space feeling. Space feeling is the idea of an infinite space, which can never be an object of perception. He maintains (with von Weissäcker) that there is no sense by which we perceive *the* space, and that we must attribute to several senses the power of perceiving spaces and spatial qualifications of things. He maintains also that the activity of the vestibular apparatus occurs unconsciously. "Sensations occasioned by the vestibular apparatus are effects of disturbance in the operation of a ramifying system answering reflexly to the finest stimuli in the service of muscular coordination." But these effects are not to be equated with a perception of the external event causing the disturbance. The vestibular apparatus is a receptor organ but not a sense organ.—*W. Wirth* (Leipzig).

3368. **Noltenius, F. Zur Psychophysik des Vestibularapparates, zugleich ein Beitrag zum Problem der Seekrankheit.** (Psychophysics of the vestibular apparatus, with a contribution to the problem of seasickness.) *Arch. f. Ohrenk.*, 1927, **116**, 210–216.—The author opposes the view of Leisse (*Arch. f. Ohrenk.*, 1925, 114, 118–128) that the vestibular apparatus takes absolutely no part in producing the spatial feeling and the sound localization dependent thereon. The connections were extraordinarily complicated, the relations have persisted, although in man they are somewhat rudimentary. Seasickness is a genuine otolith

vertigo. Due to the continual rise and fall of the ship there is a stimulation of the otolith apparatus in the sense of a "feeling of falling." Deaf mutes, whose vestibular apparatus is disorganized, do not become seasick.—*W. Wirth* (Leipzig).

3369. **Pavlov, M. Sur le rôle de l'energie des ondes pulsatiles dans la perception immediate du temps.** (Concerning the rôle of the energy of pulsatile waves in the immediate perception of time.) *J. de Psychol.*, 1928, **25**, 391–424.—Using Pachon's oscillometric method, traces of the intervals between the systolic series were obtained, and the results compared with rhythms found in music and poetry. In comparing the physiological rhythm and that of music and poetry a complete correspondence was found. "The existence of the strictest relation between the sense of rhythm and the sense of time causes us to think that the sense of time likewise has its primary source in the subconscious perception of the action of the energy of pulsatile waves." The rhythm of these waves as a result of its mechanical action upon the sense-organs provokes the feeling of duration. Temporal illusions due to states of attention, emotions, and the action of narcotics are considered.—*N. L. Munn* (Clark).

3370. **Reich, F. [Ed.] Wladislaus Zeitlin, der taubstumme Student.** (Wladislaus Zeïtlin, the deaf and dumb student.) Leipzig: Taubstummenverlag H. Dude, 1927. Pp. 56.—Self-portrayal, biography and depositions of Zeitlin, the deaf-born Russian.—*Busemann* (Griefswald).

3371. **Ruckmick, C. A. Facts and theories of audition.** *Psychol. Bull.*, 1928, **25**, 229–244.—62 titles that have appeared within about a year past are reviewed under the general topics: theory of audition, auditory sensations, sound localization, apparatus, psychology of music.—*J. F. Dashiell* (North Carolina).

3372. **Sloan, L. L. Visual sensations: a review of the literature of 1926 and 1927.** *Psychol. Bull.*, 1928, **25**, 201–228.—81 titles are reviewed under the general topics: colorimetry, photometry, color and brightness, sensitivity, adaptation, after images and contrast, perimetry, persistence and lag of sensation, color theory, and visual acuity.—*J. F. Dashiell* (North Carolina).

3373. **Spencer, L. T., & Cohen, L. H. The concept of the threshold and Heyman's law of inhibition. III.** *J. Exper. Psychol.*, 1928, **11**, 281–292.—Estimates of general and visual "freshness" and record of the number of hours sleep during the night preceding visual threshold determination by a single observer (Cohen) were correlated with visual liminal measurements. Observations were made daily except Sundays for fifty days. "Freshness" ratings and hours of sleep were found to correlate +.55 to +.80 with the values of the visual threshold. "Partial and multiple correlations indicate that the relationship between either 'freshness' or sleep-measures and the visual threshold is negligible except for the factor of susceptibility to inhibition implicated in both." For the last 25 days the values of the r's are distinctly higher than for the first 25 days.—*S. Renshaw* (Ohio State).

3374. **Squires, P. C. Apparent movement.** *Psychol. Bull.*, 1928, **25**, 245–260.—A review of 21 titles that have appeared recently on apparent movement in the visual, tactual, and auditory fields. Somewhat detailed abstracts of experimental studies are included in this account.—*J. F. Dashiell* (North Carolina).

3375. **Trimble, O. C. Some temporal aspects of sound localization.** *Psychol. Monog.*, 1928, **38**, No. 4. *Univ. Iowa Stud. Psychol.*, No. XI.—The author investigated binaural sound localization by using short, high-pitched sounds as stimuli, thereby eliminating simple phase relations. The stimulus-sounds were produced by electric sparks, and the open air method was used, rather than the method of tube conduction. When the stimuli are presented simultaneously or with an interval ranging up to approximately .06σ, a single fused sound is localized in the medium plane. This difference, .06σ, is the threshold of localization. When the temporal difference is greater than this threshold, trained observers localize two distinct sounds, one stronger in intensity and lower in pitch

than the stimuli, and one very faint and higher in pitch. When the temporal difference is gradually increased, the stronger sound describes a 90° arc from the median plane to the aural axis on the side of the ear that is first stimulated. The weaker sound makes a similar course on the other side. The relationship between the angular displacements and the temporal difference is approximately linear. As the temporal interval is increased the stronger binaural sound becomes weaker and higher, while the weaker sound becomes stronger and lower; they become diotic at the interval of $9.48 \pm 3.5\sigma$. When the temporal interval ranges above $9.48 \pm .98\sigma$ (the diotic threshold) double sounds, illusory movements of sound, and a phantom sound are perceived.—*F. A. C. Perrin* (Texas).

3376. **Valasek, J. Elements of optics.** New York: McGraw-Hill, 1928. Pp. 215. $2.00.—*W. S. Hunter* (Clark).

3377. **Woodrow, H. Behavior with respect to short temporal stimulus forms. II.** *J. Exper. Psychol.*, 1928, **11**, 259–280.—The second part of this paper presents studies by the reproduction method which confirm the earlier findings of Part I with respect to the dependence of the apparent duration of a short empty interval upon the relative durations of the sounds bounding that interval. There is a constant illusion producing overestimation of intervals starting with a long signal and ending with a short one, in comparison with an interval of the reversed temporal form. The same illusory effects were noted with some more complex temporal forms. For five observers the mean errors of estimate were of the order (1) for the long sound at the start of the interval 0.136 sec. (31%) too long; (2) for the short sound at the start of the interval, 0.076 sec. (110%) too long. The amount of error increased with practice up to 400 trials. The author holds that "owing to the agreement in the direction of constant errors detected in the two forms of behavior, judgment and reproduction, it is suggested that these errors have the same explanation in both cases," and he expresses doubt concerning the validity of Münsterberg's and other theories of time perception which "depend upon muscular activities which occur as reactions to temporal stimulus forms." The nature of the relationship between reproduction of temporal forms and oral judgments about them must be regarded as something of a riddle." The subject frequently is "amazed to see the record of his taps, showing how differently he did from what he thought he had done." High reliability is claimed for the direction of the errors, low reliability for their magnitudes.—*S. Renshaw* (Ohio State).

[See also abstracts 3351, 3401, 3410, 3418, 3424, 3563, 3622, 3641, 3670, 3752.]

FEELING AND EMOTION

3378. **Bayley, N. A study of fear by means of the psychogalvanic technique.** *Psychol. Monog.*, 1928, **38**, No. 4. *Univ. Iowa Stud. Psychol.*, No. XI.—Galvanometric and pneumographic readings and introspections were obtained from 25 observers. Various visual stimuli, mental work, verbal material, and music were employed to elicit the responses. The greatest deflections occurred in connection with startle, shock, and alarm. Continued excitement resulted in a decrease of bodily resistance. A distinction between startle and anticipatory fear was indicated by the galvanometric readings and supported by the introspections; reflexes caused by startle stimuli are temporarily more abrupt than those caused by anticipatory fears. Startle is more reflex in character than apprehension. Breathing changes were recorded, but they did not differentiate the various emotions.—*F. A. C. Perrin* (Texas).

3379. **Cattell, R. B. The significance of the actual resistances in psychogalvanic experiments.** *Brit. J. Psychol.*, 1928, **19**, 34–43.—It appears that the actual resistance is independent of the temperature and humidity of the air, but

the fall of resistance during accommodation decreases with increase of temperature. The initial and final resistances vary together, but the latter are the more affected by environmental conditions. There is a constant resistance level for a given attitude or mode of behavior, which is affected temporarily by small stimuli; acute disturbances may result in the adoption of a new attitude with a new resistance level. The resistance of an individual varies directly as the "available instinctive energy" and inversely as the "extent of release of energy taking place in consciousness." The resistances of different individuals are directly proportional to the extent of conflict experienced and suppression exercised by each.—*H. Banister* (Cambridge, England).

3380. **Leuders, C. W. Gastro-intestinal reaction to the emotions. The rôle of the vegetative system.** *Arch. Internal Med.*, 1928, **42**, 282–296.—Tables are given showing percentage acidity and motility for from 125 to 300 cases grouped according to affective types. Discussion refers to the work of Cannon, Crile and a number of others.—*R. G. Sherwood* (Stillwater, Minn.).

3381. **Segal, H. L., Binswanger, H. F., & Strouse, S. The effect of emotion on basal metabolism.** *Arch. Internal Med.*, 1928, **42**, 834–842.—"The effects of the thought of impending operation on basal metabolic rate, blood pressure and pulse rate were studied in three groups of cases. (a) A constant effect on the rate of metabolism was not seen in group I, which consisted of patients of various types of nervous stability with a normal rate of metabolism. (b) In group 2, which was made up of patients with hyperthyroidism who had received iodine according to present day preoperative routine, a marked rise in metabolic rate did not occur the day of operation. (c) Group 3 was composed of persons with hyperthyroidism who had not had iodine, as in group 2. In these cases a marked increase in the basal metabolic rate resulted the morning of the supposed operation." There was no constant relation among basal metabolic rate, blood pressure, and pulse rate. The authors suggest the use of their procedure as an index of complete or incomplete iodinization. Tables, charts and a summary of the literature are included in the article.—*R. G. Sherwood* (Stillwater, Minn.).

[See also abstracts 3420, 3475, 3476, 3706.]

ATTENTION, MEMORY AND THOUGHT

3382. **Barlow, M. C. The rôle of articulation in memorizing.** *J. Exper. Psychol.*, 1928, **11**, 306–312.—When twenty syllable lists were exposed four times the number correctly written in five minutes by the *Ersparnismethode* slightly favored learning with "full articulation" (whispering) as against "restricted articulation—holding a pencil crosswise between the teeth, the tongue being unrestrained."—*S. Renshaw* (Ohio State).

3383. **Campion, G. G. The organic growth of the concept as one of the factors in intelligence.** *Brit. J. Psychol.*, 1928, **19**, 60–64.—Campion shows that concepts are not static; they are living entities subject to a proces of organic growth. This growth is one cause of the gradual modification which is observable in our cognitive dispositions. Much experimental work and observation are necessary to elucidate the laws of growth. This growth is one of the factors which make up intelligence. Intelligence may be defined as the disciplined power of supplementing and refashioning the conceptual content of the mind by means of, or in response to, new perceptual experience.—*H. Banister* (Cambridge, England).

3384. **Claparède, E. Le témoignage.** (Testimony.) *Psychol. et vie*, 1928, **2**, 103–106.—The author shows that reliable testimony is the exception rather than the rule, and he would like each of us to test this by personal experience. The objects which daily come before our senses do not necessarily leave an image

on the memory. We are mentally blind. In addition, memory is often altered by a substitution of an invented image for a lost one. We produce a false image which is made up of the probable and which presents itself with great clearness. Another cause of error results from the faintness of perception itself; alteration is made under the influence of the emotional life.—*Math. H. Piéron* (Sorbonne).

3385. **Glaze, J. A. The association value of non-sense syllables.** *J. Genet. Psychol.*, 1928, **35**, 255–269.—2019 non-sense syllables (each being a vowel between two consonants) were shown to each of 5 undergraduate subjects in a tachistoscope; the subject was instructed to indicate in each case whether the syllable had any meaning for him. 101 syllables had zero meaningful-association value and 119 had 100%, while between these extremes they were about evenly distributed. Syllables with high association value were those forming the beginnings of words, and those suggesting words expressing action or expressing domestic or agricultural activities. In spite of the fact that the subjects in this research were set to discover meanings, it is gratifying to find that there is a fair-sized supply of syllables that can be used with confidence.—*J. F. Dashiell* (North Carolina).

3386. **Heron, W. T. The warming-up effect in learning nonsense syllables.** *J. Genet. Psychol.*, 1928, **35**, 219–228.—Undergraduate subjects were practiced once per week for four weeks in memorizing syllables arranged as paired associates. (In some cases identical syllables were placed in the two sets used in a given experiment, but negative transfer effects were negligible.) Readings and attempts at reproduction were repeated until the subject had made all correct responses, and records were taken in terms of the number of trials required—a method at variance from that of the usual warming-up experiment, in which the time is kept constant and the work measured. In every case it took less time to learn the second list than the first. On the evidence, this result is ascribed to a warming-up factor rather than to practice effect or to the transfer of specific habit-units.—*J. F. Dashiell* (North Carolina).

[See also abstracts 3414, 3487, 3671, 3715.]

NERVOUS SYSTEM

3387. **[Anon.] Problems of cerebellar function.** *Lancet*, 1928, **214**, 88–89.—Points out our lack of precise knowledge concerning the function of the cerebellum. The clinico-pathological data seems to justify the conclusion that "a part, possibly the major part, of cerebellar activity in the normal person is concerned with the function of coordination of movement, but not with its innervation."—*W. T. Heron* (Minnesota).

3388. **[Anon.] The tuber cinereum and its functions.** *Lancet*, 1928, **214**, 869.—Work of French investigators tends to show that centers lying in the floor of the third ventricle have functions with which the pituitary was till recently credited. Disturbances of sleep rhythms have accompanied lesions of the paraventricular nucleus of the tuber. The pituitary has been left with no function save that of regulating bone growth.—*W. T. Heron* (Minnesota).

3389. **[Anon.] Removal of the right cerebral hemisphere in man.** *Lancet*, 1928, **214**, 1337–1338.—A discussion of the report of 5 cases which is made by Dandy in the *J. Amer. Med. Assoc.* As a result of this operation there is complete paralysis of left arm and leg but only partial paralysis of left side of face. There is no obvious mental impairment, hearing remains normal in both ears. There is anesthesia of the left side of body and left homonymous hemianopsia.—*W. T. Heron* (Minnesota).

3390. **Donaldson, H. H., & Canavan, M. M. A study of the brains of three scholars.** *J. Comp. Neur.*, 1928, **46**, 1–95.—Twenty-one charts and twelve heliotype plates. The original materials used in this study are the brains of three eminent scholars: G. Stanley Hall, William Osler, and Edward S. Morse. With these are compared and contrasted the brains of three members of the Southard family, consisting of the neurologist, E. E. Southard, and his father and mother previously studied by Canavan (1925) using similar methods. All comparisons are based upon the brains after they had been fixed in formalin and all measurements were taken by one person (Canavan), hence a certain degree of comparability is obtained, although the degree was less than that desired by the authors. With each account of a scholar's brain is given a brief biography of the subject and a list of his outstanding characteristics and attainments. The sex, age at death, and brain weight of these six subjects are as follows (specimen preserved in formaldehyde and pia removed):

	Age at death	*Brain weight in grams*
G. Stanley Hall	78M	1412
Wm. Osler	70M	1396
Ed. Morse	87M	1309
E. Southard	45M	1405
M. Southard	72M	1242
Olive Southard	76F	1150

The authors present their chief factual contributions in numerous tables and graphs. Generalizations based upon the more comparative aspects of their findings are few and made reservedly because of the difficulties they recognize in establishing comparability of conditions for study. It appeared, however, that the brains of the three eminent scholars were somewhat more developed and had been better nourished than those of the other group. The latter is thought to be a condition favoring superior performance. The cortex of the scholars is greater in the frontal lobe than that of the other group. This greatness consists primarily in thickness of the cortex and not in increased mass or bulging of its superficial aspects. Likewise the occipital poles of the scholars showed superior development. With superiority of development goes the tacit implication of superior nutritional conditions, which, in turn, affect in a favorable way the functional activity of these parts of the brain. Since all measurements were made prior to and without specific knowledge of the use to which they were to be put, specific or general bias affecting the conclusions did not operate. The study as a whole supports the already established view that arrangement of gyri and sulci do not afford a basis from which mental abilities may be inferred.—*C. P. Stone* (Institute for Juvenile Research).

3391. **Forbes, H. S. The cerebral circulation. I. Observation and measurement of pial vessels.** *Arch. Neur. & Psychiat.*, 1928, **19**, 751–761.—Apparatus is described for observing the blood vessels of the pia in living anesthetized animals, and for measuring their changing diameters. The value of recording at the same time the changes in pressure within the skull and within the blood vessels in various situations is emphasized. A technique has been developed for making photomicrographs in black and white and also in color. A few observations on the usual appearance of the vessels have been added.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3392. **Forbes, H. S., & Wolff, H. G. Cerebral circulation. III. The vasomotor control of cerebral vessels.** *Arch. Neur. & Psychiat.*, 1928, **19**, 1057–1086.—By direct micrometry and photomicrography, together with simultaneous measurements of cerebrospinal fluid pressure and of intracranial and extracranial vascular pressures, evidence has been secured that the circulation of the brain is not regulated wholly from a distance by splanchnic or systemic vaso-

motor control. On the contrary, many influences share in this vital regulation. Thus it has been found that, although the changes in caliber of the cerebral arteries may passively follow sharp fluctuations in systemic arterial pressure, constriction of arteries also follows direct application of epinephrine or stimulation of the vagus. It seems justifiable to state that evidence of a quantitative nature has been obtained that the circulation of the mammalian brain is controlled in part by cerebral vasomotor nerves.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3393. **Kolmer, W. Über die Innervation der Korbzellen der Drusen.** (On the innervation of the basket cells of the glands.) *Anat. Anz.*, 1928, **66**, 65–68.—Histology of the nerve endings serving to innervate the myo-epithelial basal cells of the salivary glands.—*J. F. Brown* (Yale).

3394. **Kraus, W. M., Davison, C., & Weil, A. The measurement of cerebral and cerebellar surfaces. III. Problems encountered in measuring the cerebral cortical surface in man.** *Arch. Neur. & Psychiat.*, 1928, **19**, 454–477.—The authors present some idea of the principles, the necessary technic and the elements of error, some of which can be avoided, some of which cannot. Tentative figures in the estimation of the cerebral cortical surface are given. According to this method, the total cerebral surface was found to be 2,895.40 sq. cm.; the visible cerebral surface, 639.18 sq. cm., giving as a ratio 4.53:1.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3395. **Kunert, G. Über das wartenbergsche Daumenmitbewegungsphaenomen.** (Wartenberg's phenomenon, co-movement of the thumb.) *Arch. f. Psychiat. u. Nervenkr.*, 1927, **81**, 579–594.—Verification of a new symptom for foci in the upper part of the pyramidal tract from its cortical origin as far as the cervical cord.—*W. Wirth* (Leipzig).

3396. **Meyer, A., & Hausman, L. The forebrain.** *Arch. Neur. & Psychiat.*, 1928, **19**, 573–595.—An outline of a course of study (used at Johns Hopkins and Cornell medical schools) which takes into account the sequence of development which the data and methods of embryology and comparative anatomy reveal. By combining this perspective with a survey of the facts of neurophysiology and of experimental and pathological neuro-anatomy, a dynamic approach to the study of the central nervous system is provided. The purpose is to present the mechanisms of the forebrain in terms of this analysis with the various systems translated into three dimensions by means of an accurate plasteline reconstruction made from a complete series of Weigert-stained cross-sections of a human adult brain.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3397. **Tetsuo, I. On the loss of Purkinje cells, with advancing age, from the cerebellar cortex of the albino rat.** *J. Comp. Neur.*, 1928, **45**, 1–32.—Five charts and 12 figures. Account of Purkinje cells of the cerebellar cortex of a few rats of three age levels was made for the purpose of ascertaining whether there is a loss in this type of cell from middle age to late senescence. It was found that the number of Purkinje cells decreases with each successive age. As compared with the number present in the young adult of 200 days, approximately 85% of this number was found at the age of 2 years and only 80% (in round numbers) at the age of three years (late senescence). This loss of Purkinje cells correspond in kind and in degree to the loss found in the cerebellum of man. It is suggested that this loss of Purkinje cells may be one of several causes leading to progressive loss of motor control in the aged.—*C. P. Stone* (Institute for Juvenile Research).

3398. **Tilney, F. The brain from ape to man.** New York: Hoeber, 1928. Pp. xxvii + 473; xv + 474–1120. $25.00.—This extensive original contribution to the study of evolution and development of the human nervous system is presented as the first of a tripartite cerebral survey of the vertebrates, the succeeding parts of which will discuss "Brain evolution from mammals to man" and "The brain from fish to man." To discover and exhibit evolutionally significant con-

ditions and contrasts in neural structure and behavior Tilney has used eleven primate types: lemur, tarsius, marmoset, howling monkey, baboon, macacus monkey, gibbon, orang-outang, chimpanzee, gorilla, man. Each type is separately and briefly described as to general appearance, distribution, mode of life, and behavioral characteristics. This general, and mainly borrowed, information serves as background for the original description of the brain which constitutes the major portion and also the heart of the work. The brain description is selective instead of exhaustive, for the publication is offered as a contribution to the evolution of the nervous system, not as an atlas of primate neurology. The method is consistently followed of summarily describing the surface appearance of the brain—fissures, convolutions, lobes—and more elaborately the structures of the brain stem, including the medulla oblongata, cerebellum, pons Varolii, midbrain, and interbrain. The materials for brain stem description are derived from (1) observation of external configuration, (2) microscopic study of sections made at several critical levels, and (3) reconstructions of the gray matter by the method of Bourne. For the work of reconstruction and the eleven chapters of the volumes which by description of its results importantly supplement Tilney's account of the internal structure and proportions of the brain stem, Henry A. Riley is responsible. As basis for quantitative comparisons, certain structures in the brain stem were measured and from the data two series of coefficients were derived. For the first, called planimetric coefficients, "the transverse proportions of a given structure were estimated in relation to the entire cross section by means of a planimeter," and for the second, longitudinal coefficients, "estimates . . . . were made with the purpose of determining the relative length of each structure to the entire length of the brain stem" (p. xi). These coefficients are the conspicuously novel and useful features of the work. On their reliability its value and fate largely depend. In attempt to correlate structure with function, contrast is pointed between an older or evolutionally more primitive and a newer type of motor organization. "The neural combinations assembled in the neopallium and projected by the pyramidal system have their externalized expression in an extensive group of reactions collectively known as *neokinesis*" (p. 700). For the more primitive system the term *paleokinesis* is used. Neokinesis is characterized by relatively great variability, especially in time relations, and by marked and varied adaptability. It is conspicuous in the mammalia and particularly so in monkeys, apes, and man. Paleokinesis is characterized by relative constancy and low modifiability. It may be observed to advantage in fish, reptiles, and birds (p. 1038). The work is divided conveniently into five parts: I, The lower primates, II, The intermediate primates, III, The higher anthropoids, IV, Man, and V, Evolutional modifications of the primate cerebrum culminating in the human brain. Each part concludes with a comparative summary of structures having evolutional significance in the brain stems of the particular group of primates considered. The text is abundantly and well illustrated. No historical materials appear in the structural portions of the work and they lack references. The functional portions mention the contributions of a few investigators but omit historical review. A list of references for further reading and an elaborate index appear in volume two.—*R. M. Yerkes* (Yale).

3399. **Windle, W. F., & Clark, S. L. Observations on the histology of the synapse.** *J. Comp. Neur.*, 1928, **46**, 153–172.—One text figure and four plates. The authors studied parts of the central nervous systems of a wide range of young and adult laboratory animals. For the most part, the materials had been stained by the pyridine-silver method. Other silver reduction processes as well were used, however. Discontinuous, rather than syncytial, mechanisms at the junctions of neurons were demonstrated in the adult spinal cord and cerebellum. Likewise discontinuous synapses were found in the trapezoid body and cerebellum of the young. No evidence for continuity of neurons was found anywhere,

although evidence of discontinuity could not always be found. The authors suggest that in the face of positive evidence for the discontinuous mechanism at the neuronal junctions, failure to find them in all cases should not be taken as evidence for a syncytial relationship of neurons.—*C. P. Stone* (Institute for Juvenile Research).

[See also abstracts 3402, 3405, 3406, 3429, 3436, 3441, 3523, 3524, 3532, 3555, 3726.]

MOTOR PHENOMENA AND ACTION

3400. **Adams, G. Human instincts.** *Amer. Mercury*, 1928, **14**, 456–460.—A brief sketch of the history of the use of the term instinct in psychology is followed by a critical review of the use of the term by American psychologists. The author quotes with approval authorities who hold that the term has no exact scientific significance.—*J. T. Metcalf* (Vermont).

3401. **[Anon.] Movements of the eyes in reading.** *Lancet*, 1928, **214**, 664.—Discussion of article by Vernon in March 1928 number of the *British Journal of Ophthalmology*.—*W. T. Heron* (Minnesota).

3402. **[Anon.] Physiology of the cerebral hemispheres.** *Lancet*, 1928, **214**, 970–971.—An abstract of the Croonian Lecture before the Royal Society by Ivan Pavlov.—*W. T. Heron* (Minnesota).

3403. **[Anon.] The borderland of physiology and psychology.** *Lancet*, 1928, **214**, 1023–1024.—A discussion of Pavlov's work on reflexes. A suggestion that his work may forge a "further connecting link between physiological and psychological medicine."—*W. T. Heron* (Minnesota).

3404. **Antipoff, H. L'évolution et la variabilité des fonctions psychomotrices.** (The evolution and the variability of psycho-motor functions.) *Arch. de psychol.*, 1928, **21**, 1–54.—This research deals with 7 tests—dotting, tapping, stringing beads, cutting out, Walther's discs, target-embroiderer (*ciblebrodeur*), and the dynamometer. These were made on 750 subjects of both sexes from the age of 4–6 years to adult age. The children came from different schools, elementary, primary, professional, etc. The author gives a description of the technique of the tests and standards for the percentiles (the sexes being separated after the age of 11). The tests, repeated four times by the same individuals, turned out to be constant with one exception. The discussion of the results shows that there is from the very beginning a noticeable influence from the environment and in particular an advantage which the intellectual group had over the workers in the tests for tapping, dotting, and cutting out, whereas for the other tests the inverse is true. This unexpected result arises probably from the affective sphere, from a readiness to follow the instructions according to the nature of the test. In order to take into account the environment the author proposes either the establishment of partial standards for the individuals of the same environment or the construction of universal standards based on a great number of individuals of various environments. There should be established social coefficients for each environment, the psychologist, in addition, having to determine experimentally the discriminative criterion for the different environments. A calculation of these discriminative indices of development and of aptitude (Claparède) shows that the value of the different tests, like the tests for development or for aptitude, is extremely variable. The superposition in a single graph of the ogives of all the ages for the same tests permits a distinguishing of these following cases: For certain aptitudes the progress from age to age is regular, forming a scale of equal degrees (*type "échelonné"*). For other aptitudes the progress from age to age is irregular; there are large gaps between

certain ages and, contrariwise, no progress in other periods. The degrees of development are accordingly far apart from one part of the development and crowded together (*massés*) in another part of the development (*type "échelonné-massé"* or *"massé-échelonné"*). If the increase of output (medians) of an aptitude with the age (vertical dispersion) is examined, it is seen that the dispersion ceases at a certain age, varying from one test to another, which can be called the adult age for that aptitude. In order to be able better to evaluate the early development of the aptitudes, one might use with advantage the maximal or the absolute percentile method, classing an individual according to his ranking with the results gotten from adults. The variability of an aptitude (horizontal dispersion) may increase (dynamometer test), remain constant (tapping, cutting out tests), or diminish (discs, dotting, stringing beads) with age. Photographic registration of the movements for the disc test shows that the development influences both the rapidity and the quality of the movement. As to the influence of sex, the boys were better at the dynamometer and at tapping, while for the other tests the predominance of one sex over the other varied with age, the girls of 15 being in general more skilful than the boys of the same age. The correlations between the different tests showed that the different motor functions to which they appealed were relatively independent except in a small percentage of individuals who were either very good or very poor. It is then difficult to speak of a general aptitude for these tests of manual skill. Finally, the correlation between the whole of the tests and intelligence is slightly negative. However, in children of arrested development the mental deficiency goes along with motor deficiency.—*M. R. Lambercier* (Geneva).

3405. **Barrington, F. J. F. The central nervous control of micturition.** *Brain*, 1928, **51** (Part 2), 209–220.—Examination of the reflexes which make up micturition led to the finding of five separate reflexes, related to bladder pressure, contraction and relaxation. Experimental evidence is offered for the origin and pathways of these reflexes. While micturition is obviously under the direct control of the will, the existence of these five reflexes shows that contraction of the bladder is not necessarily under voluntary control. Transection of peripheral nerves or spinal cord produced, in general, retention with overflow, followed by automatic micturition. It was possible to localize the part of the brain essential to the performance of micturition, and the region of the centripetal path from the origin of the micturition reflexes to a higher part of the brain. The paper is concluded with a short comparative discussion of the bladder in fish, amphibians, reptiles and mammals.—*E. N. Brush* (Boston Psychopathic Hospital).

3406. **Bender, L. The cerebellar control of the vocal organs.** *Arch. Neur. & Psychiat.*, 1928, **19**, 796–833.—An experimental study from which the author concludes that lesions of any part of the cortex of the vermis, of the roof nuclei or of the decussation between these nuclei do not produce changes in the function of the vocal cords in dogs, but that lesions to those tracts which connect the cerebellum with the medullary nuclei do produce motor disturbances of an ataxic type. Therefore the cerebellum does appear to have some control over the motor activities of the vocal cords, though this control has not been localized in any part of the cerebellar cortex so far studied.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3407. **Borovski, W. M. Einige Bemerkungen über Triebe und Instinkte.** (Some remarks on drives and instincts.) *Biol. Zentbl.*, 1928, **48**, 470–474.—From the standpoint of the Russian reflexologists the author attacks the drive and instinct concepts, particularly as used by Fischel in his article "Zur Soziologie des Haushuhns," *Biol. Zentbl.*, 1928, **48**, (see II: 633). His suggested solution is in terms of physiological behavior and the conditioned reflex.—*J. F. Brown* (Yale).

3408. **Cobb, I. G. The glands of destiny.** New York: Macmillan, 1928. Pp. 302. $3.00.—*W. S. Hunter* (Clark).

3409. **Dumas, G. Les besoins.** (Needs.) *J. de Psychol.*, 1928, **25**, 330–390. —Needs may be grouped into two large classes: (1) those relative to the life of the individual, and (2) those relative to the life of the species. In the first classification we find (a) needs for acquisition of air, food, and water; (b) needs of evacuation—defecation, urination, and vomiting; (c) needs for expenditure of physical and mental energy: (d) needs for reparation—rest and sleep; and (e) needs for stimulation—emotional needs and the need for drugs. The second class comprises (a) the sexual need, in both male and female; and (b) the maternal need. Most of these needs receive a detailed discussion from the physiological and psychological angles. The author, after discussing the physiological concomitants of these needs, has sought to determine the consequences which bring them into consciousness. He concludes with a consideration of the socialization of needs and their influences upon etiquette, ethics, esthetics, and religion. In discussing the physiological bases of the needs, Dumas has drawn exhaustively upon the experimental work in these fields.—*N. L. Munn* (Clark).

3410. **Fischer, M. H. Messende Untersuchungen über die Gegenrollung der Augen und die Lokalisation der scheinbaren Vertikalen bei seitlicher Neigung des Kopfes, des Stammes und des Gesamtkörpers. I. Mitt. Neigung bis zu 40 Grad.** (Quantitative investigations upon the compensatory turning of the eyes and the localization of the apparent verticals during sidewise inclination of the head, of the trunk and of the entire body. 1st communication: Inclination up to 40°.) *Arch. f. Ophth.*, 1927, **118**, 633–680.—(1) Trials mostly with one subject, by the method of after-images. At 40°, maximal value 5° to 6°, for right and left inclination, the same for both eyes. These statements refer to the persistent component (as position reflex). (2) Inclination of the trunk 40°, but with the head vertical (with neck reflex). The eyes roll about 2° or 3° in the direction of the trunk. (3) Determination of the apparent verticals with 4 luminous lines in a dark room. The Aubert phenomenon (the verticals being carried along with the head) is somewhat less in degree when the head is inclined than when the entire body is inclined. The apparent vertical moves toward the inclined trunk-axis when the head remains vertical. The new line lies between the vertical and that of the body or trunk. Great individual variation. No close relation to the orientation of the eye in the various postures.—*W. Wirth* (Leipzig).

3411. **Horrax, G., & Bailey, P. Pineal pathology.** *Arch. Neur. & Psychiat.*, 1928, **19**, 394–414.—The function of the pineal body in the human organism is still the subject of controversy; physicians are yet only at the stage of collecting evidence. The chief theory assumes that a secretion from this organ inhibits puberty, and that an involutional change during puberty diminishes its secretion, thus allowing sexual characteristics and activity to appear. The authors present three cases of clinicopathologic observations as documents to be used in gaining some insight into the problem, being themselves unable to interpret them in the light of their present knowledge.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3412. **Ivanov-Smolensky, A. G. The pathology of conditioned reflexes and the so-called psychogenic depression.** *J. Nerv. & Ment. Dis.*, 1928, **67**, 346–351. —An account of experiments in artificially producing depressions in dogs, as a means of studying the pathobiological mechanism and the pathophysiological substratum of the reactive or psychogenic depression in man. In all cases of psychogenic depressions which are developed under the influences of an exceptionally difficult position in life and disappear when the conditions of life become easy, the surrounding biosocial medium gives the highest nervous system the difficult task of balancing the cerebral stimulative (irritative) and the inhibitive processes. A strong and well-balanced nervous system can generally master the

situation, but if unable to it may lead to different forms of neurosis, or to a prevalence of the inhibitive process, or to an irradiation of inhibition from the cortex of the cerebral hemispheres over the lower parts of the central nervous system. At this time the forming of new motor habits is scarcely possible, customary habits are inhibited and frequently there is an inhibition of different vegetative reactions. Patients in such a state refuse food, their sexual activity is markedly reduced and a complete inhibition of active self-defence is noticed. There is also a disappearance of interest in their surroundings. It is possible that many, if not all, states of depressive melancholy, which are diagnosed as circular psychosis, are based on this mechanism.—*R. A. Young* (Boston Psychopathic Hospital).

3413. **Kemal, C. Contribution a l'étude des tests de développement moteur d'Ozeretzky.** (Contribution to the study of Ozeretzky's tests for motor development.) *Arch. de psychol.*, 1928, **21**, 93–99.—These experiments are a supplement to those published by Merkin in 1925. They were made on 110 normal children of both sexes, between the ages of 4 and 14 years, and on 20 abnormal children. They bear on five points: (1) The general value of the Ozeretzky scale. The results correspond in the main to Merkin's. The tests for the younger ages were pretty well standardized, those for the 8-year-olds were too easy, while those for the older ages were too difficult. The difference might arise from the environment or from the fact that Ozeretzky established his scale on a greater number of girls than of boys and that he considered the results from the two sexes together. (2) A comparison of boys and girls from the motor point of view. Between the ages of 4 and 8 years the results were almost exactly alike. This period is a phase of sexual non-differentiation from the motor point of view. After 9 years of age, the girls were noticeably inferior to the boys; thus, two different scales become indispensable. (3) Correlation between the motor and the mental levels (Terman). In a comparison of the ogives of the motor quotients with those of the intelligence quotients, it was seen that the tests of Ozeretzky were graded too low. There existed no correlation between motor and mental development. (4) Motor tests on the abnormal children. The small number of cases permitted only an indication of the difficulty that exists in setting the problem of the relation between motor and mental retardation. It was necessary to distinguish between the true motor retardation arising from an incapacity to acquire motor activities and the physical impossibility of executing a task as a consequence of a pathological state of the muscular system or of bodily deformations. Intelligence retardation may also hinder the child from understanding what he is to do. The correlation between the motor and the intelligence quotients amounts to 0.70. (5) Are the motor tests a test of age or of aptitude? The small number of cases does not permit a decision of this question.—*M. R. Lambercier* (Geneva).

3414. **Lemmon, V. W. The relation of reaction time to measures of intelligence, memory, and learning.** *Arch. Psychol.*, 1928, No. 94. Pp. 38.—The problem was to determine the correlation between speed of reaction and certain measures of intelligence, memory, and learning. The subjects were 100 Columbia College undergraduates. Visual stimulation for both simple and discriminative reactions were given. The reaction times were measured with a Hipp chronoscope, using the Dunlap circuit without springs. The correlated measures were the Thorndike Intelligence Examination for High School Graduates, the logical memory tests, auditory paired associates and visual paired associates tests, the Turkish-English test, the Digit-Symbol Substitution and the code tests. In general, the results show that intelligence, memory, and learning all have factors in common with reaction speed. Intelligence and learning are more closely related to the discriminative reaction; memory to the simple reaction. The high correlation between reaction time and intelligence reported by Peak and Boring

is not confirmed. The hypothesis is advanced that speed of conduction in nerves and synapses is one of the most important common factors responsible for the correlations. It is argued that speed may partly determine the level or quality of intelligence and degree of learning ability possessed by a given individual.—*E. M. Achilles* (Columbia).

3415. **Lyman, R. S. Ankle-clonus: the distinction of the organic and functional varieties.** *Brain*, 1928, **51** (Part 2), 168–183.—Although usually associated with a pyramidal lesion, sustained ankle-clonus may occasionally have a physiological, or functional, etiology. A rapid and simple test is offered as a clinical aid in distinguishing organic from functional types of clonus. It consists of forcible plantar flexion of the homolateral hallux while ankle-clonus is being maintained. If the clonus is then checked, an organic lesion in the central nervous system is postulated. If it persists in spite of prolonged toe-flexion, it is probably functional in origin. The mechanism of cessation of ankle-clonus by flexion of the great toe in organic disease depends on an antagonism of reflexes. Clonus requires increased tone of the extensor muscles of the foot. Forceful plantar flexion of the hallux gives rise to the withdrawal of flexion reflex in which there is strong tonic contraction of the dorsiflexors of the foot. This flexor contraction causes reciprocal relaxation of the opposing extensor muscles with consequent disappearance of the clonus. Plantar flexion of the great toe provides stimuli which are largely proprioceptive and which make up the sensory portion of the arc relating to the flexion reflex. This procedure has been described before, although the application has usually not been made in differentiating these two forms of clonus. There is a list of 56 references.—*E. N. Brush* (Boston Psychopathic Hospital).

3416. **McKinley, J. C., & Berkwitz, N. J. Quantitative studies on human muscle tonus. I. Description of methods.** *Arch. Neur. & Psychiat.*, 1928, **19**, 1036–1056.—A method of measuring human muscle tonus is here set forth with its advantages. The authors find tonus present in both the flexor and extensor muscles of the elbow and hold as probably fallacious the theory that tonus is present in the postural muscles and probably absent or nearly absent in the antagonists. Normal persons may be classified broadly into two types, phlegmatic and excitable, as regards fluctuation in their muscle tonus. Confirmation is made of the usual clinical observations relating to increase and decrease of tonus in hemiplegia, paralysis agitans and progressive muscular dystrophy.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3417. **Métalnikov, S. Le rôle des réflexes conditionnels du professeur Pavlow dans l'immunité.** (The rôle of Professor Pavlov's conditioned reflexes in immunity.) *Bull. méd.*, 1928, **42**, 449–451.—Definite experiences have shown that conditioned reflexes can play a very important part not only in immunity reactions but also in different diseases. Everything in the patient's environment can act as a conditioned stimulus provoking the same disease as the original cause. Likewise, during convalescence and immunization there are formed conditioned reflexes which provoke reactions of useful defense. In order that a conditioned reflex be established it is necessary that the conditioned stimulus always precede the natural stimulus. By repeating this combination 20 or 30 times the desired conditioned reflex is gradually established. This reflex calls forth the same effect as the remedy itself.—*Math. H. Piéron* (Sorbonne).

3418. **Metzger, W. The mode of vibration of the vocal cords.** *Psychol. Monog.*, 1928, **38**, No. 4. *Univ. Iowa Stud. Psychol.*, No. XI.—The author investigated two problems: (1) the direction of vibration in the human vocal cords, (2) the question of whether the cords vibrate transversely or laterally. An extensive review of the theoretical and experimental literature is given, followed by a description of the author's technique for getting X-ray front view photographs of the cords during voice production. This technique involves

painting the throat and upper part of the oesophagus of the subject, and then inserting the plate of the apparatus back of the cords. The author concludes that during vocalization the cords assume the shape of lips, rather than bands, and proposes the term "voice-lips" as a substitute for vocal cords. Contrary to the assumptions made by several earlier investigators, alternate vibrations of the voice-lips do not appear. Ewald's assumption, that the action of the voice-lips is a cushion action, is supported. No adjustment of the pharynx can change the pitch to the next higher or the next lower octave. Sex differences in voice and pubertal voice changes in boys can be explained by the relations between the frequency of the vibrating voice-lips and bronchial resonance.—*F. A. C. Perrin* (Texas).

3419. **Müller-Freienfels, R. Zur Psychologie und Pathologie der Selbstbeherrschung.** (On the psychology and pathology of self-control.) *Psychol. u. Med.*, 1928, **3**, 45–53.—Self-control is a paradoxical concept, for control implies two parties, one to rule and one to be ruled. This notion is opposed to the "unity of the ego." Nearly everyone, however, recognizes in the ego parts that can be distinguished. Thought is never an absolute ruler within the mind. Even in the most intellectual people, thought is strongly dependent upon feelings, affections, moods, instincts, and subconscious dispositions. Pathologically, we mean by lack of self-control either discord within the mind itself or conflict between the individual mind and its surroundings. Ideals of self-control differ with the social milieu. What would be heroism in a soldier would be pathological under other circumstances. Self-control really means control by norms higher than the individual. Supernaturalists regard these norms as commands of God. Empiricists look upon them as social necessities. In any case self-control implies control of the self by something beyond the self.—*M. F. Martin* (W. Springfield, Mass.).

3420. **Richter, C. P. The electrical skin resistance. Diurnal and daily variations in psychopathic and in normal persons.** *Arch. Neur. & Psychiat.*, 1928, **19**, 488–508.—Observations were taken in the cases of 26 normal persons and 66 psychopathic patients. The former gave fairly constant records, showing no wide individual differences. Schizophrenic patients with marked feelings of passivity deviated to one extreme; those of active or paranoid reaction type to the other. The records from manic, depressive and hysteric patients deviated slightly, but were still within normal limits. Patients complaining of chronic fatigue also gave distinctive records all of the same type. A discussion of the physiologic origin indicates that differences in emotional and mental condition can be measured more satisfactorily by skin resistance than by many of the other physiologic responses, such as blood pressure, basal metabolic rate and body temperature, because any differences in the latter are always quickly compensated and brought back to a normal level. An additional and important advantage is that readings in this method can be taken easily and quickly and can be repeated at frequent intervals.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3421. **Rockwell, J. G. The thyroid gland.** *Psychol. Bull.*, 1928, **25**, 341–360.—A review of 202 publications. Experimental and clinical studies have on the whole supported the common attribution of certain symptoms (as in cretinism and in myxedema), to hypofunctioning of the thyroid, but have given less support to the attribution of others (as in exophthalmic goiter) to hyperfunctioning. Many studies have been made on the relations of the thyroid to growth, to metabolism, to sex, and to learning.—*J. F. Dashiell* (North Carolina).

3422. **Spiegel, E. A. Der Tonus der Skelettmuskulatur.** (The tonus of the skeletal muscles.) Berlin: Springer, 1927. Pp. 202. M. 18.—The work represents the present position on this topic, the author having made as complete a survey of the literature as possible (about 600 numbers) and also many original researches upon animals and human beings. Part I, which is intro-

ductory, gives a definition of tonus, and of static innervation, which maintains the tonus, in distinction from kinetic innervation; it presents also the concept of the static metabolism of energy. Part II, on "Energetics and mechanism of continuous contraction," distinguishes the case of invertebrates, in which a continuous contraction takes place without measurable expenditure of energy, from the case of mammals, in which the maintenance of tonus is accompanied, at best, by an expenditure of energy which is very small and difficult to measure. The decisive factor in the maintenance of tonus, as also in kinetic activity, lies in the carbohydrate metabolism (not in increased creatin formation). The different forms of contraction are said to be explainable by the theory of swelling. The exact analysis of tetanic rigidity in the leg muscles of the white rat also shows that there is no qualitative difference between static and kinetic innervation. The author did not find any other swelling relations of the rigid muscle, nor any increased extensibility of the antagonists, nor a centrally caused inhibition of relaxation. Also, the shifting of the innervation relations of flexors and extensors is not decisive, but there is a continuous excitation of the cells of the anterior horn during this rigidity. Part III is on "The measurement of muscle tonus." In the tension curve of the muscle, i.e., in the dependence of tension upon the load (which the author shows precisely for the human leg muscle, among others, by means of a special apparatus), the measurement of tonus shows the nature of the "braking" (Rieger), which persists even in hypnosis and superficial narcosis, and disappears only upon exclusion of the proprioceptive stimuli (in degeneration of the posterior roots in tabes). The braking consists of a brief reflex and a continuous innervation, which is independent of the pyramidal tract (present even in hemiplegia and multiple sclerosis). The relation to Sherrington's shortening reaction is explained. Part IV is the largest and is entitled "The central mechanism of static innervation." It aims to present as complete a picture as possible of static innervations from the most various sources, and their reversals, involving all regions of the central nervous system, from the intraspinal paths up to the forebrain ganglia, especially the rôle of the midbrain ganglia (substantia nigra and red nucleus) which have been very much studied recently. These, according to investigations of the author, actually suffice for hypnosis-catalepsy even in mammals (midbrain in rabbit). In order to study more precisely the inhibition caused by the cerebrum, plaster of Paris was used to produce hardening and inactivity on both sides, and, according to the degree of treatment, the author studied one-sided exclusion of certain parts of the brain (pyramidal tract, fronto-pontile tract, temporo-pontile tract). The hypothesis of the double innervation of skeletal muscle (by sympathetic fibers or efferent fibers from the dorsal root, in addition to the fibers from the ventral root) is branded as not proven. The author maintains that the static and the kinetic innervations occur in identically the same manner.—*W. Wirth* (Leipzig).

3423. **Syz, H. C., & Kinder, E. F. Electrical skin resistance in normal and in psychotic subjects.** *Arch. Neur. & Psychiat.*, 1928, **19**, 1026–1035.—Features found consistently throughout the various groups studied (normal, paranoid schizophrenic, depressive, catatonic) were: back-to-back resistance was relatively much higher than the palm-to-palm resistance; the resistance of the right hand was higher than that of the left, and a decrease in resistance occurred during the period of the experiment. The group differences are indicated with respect to number of psychogalvanic responses and spontaneous waves, initial resistance and changes in resistance during the test. These differences, which appear with marked consistency, indicate that certain alterations in the function of the physiologic mechanisms of the skin are characteristic for the various reaction types. There is every indication that the skin mechanisms underlying the phenomena here studied are influenced through impulses arising in the central

nervous system and that thus changes of the entire organism (emotions and psychopathologic conditions) involve characteristic alterations of those physiologic part-functions which determine or are expressed through the electrical skin resistance and the psychogalvanic reflex.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3424. **Travis, R. C., & Dodge, R. Experimental analysis of the sensorimotor consequences of passive oscillation, rotary and rectilinear.** *Psychol. Monog.*, 1928, **38**, No. 3.—This investigation is concerned with the two components of passive movement; namely, rectilinear and rotary. The apparatus for the study of rotary motion consisted of a platform supporting a chair, a lever system used by the subject to indicate the direction and extent of apparent motion, and a recording system which registered both apparent and actual motion. The platform was rotated by a driving rod attached to a Pathé spring motor. Another platform, placed on the edges of two rolling brass segments, was used in the study of rectilinear motion. The data show that it is impossible to find an actual threshold for either rotary or rectilinear oscillation. Below and above the theoretical threshold, however, certain relationships obtained. In rotary and rectilinear sine wave oscillation the percentage of right responses varies directly with average velocity and average acceleration, while negative and zero responses vary inversely with average velocity and oscillation. When vestibular stimuli of fixed intensity and frequency are used, the voluntary manual compensations are extremely variable. A variation was found in the time of responding after the initiation of the stimulus. Summation of stimuli is necessary to evoke a response when the frequency and intensity of the stimulation decrease. There is a tendency to perceive motion in a wrong direction at low intensities and frequencies of oscillation. Visual cues are more effective than vestibular in the perception of oscillation when the subject is seated at the axis of rotation. When the body is free to move in a standing position it tends to move away from the perpendicular during oscillation, and this movement in turn stimulates kinesthetic receptors, thus introducing additional factors in the perception of motion. Kinesthesis is more than 10 times as effective as vestibular functioning in the perception of oscillatory motion in rectilinear directions. Rotary oscillation with the subject at various distances from the axis is an ideal arrangement for combining rotary and rectilinear components.—*F. A. C. Perrin* (Texas).

[See also abstracts 3348, 3367, 3368, 3382, 3573, 3588, 3666, 3692, 3696, 3726.]

PLANT AND ANIMAL BEHAVIOR

3425. **Alverdes, F. Social life in the animal world.** New York: Harcourt, Brace; London: Kegan Paul, 1927. ix + 216 pp.—Although the social psychology of state-forming insects is well covered in scientific literature, our knowledge of the social life of other animals has been less carefully brought together; this book attempts to make up for this deficiency. The treatment is confined to "those social creations in which animal psychology (i.e., a specific social instinct) is the essential factor." Therefore, the facts of symbiosis, synoikia, parasitism, mimicry, hive-formation, etc., are omitted. The author relies for his data on what is given in the experimental literature (which is small in quantity) and on the accounts given in Brehm's *Tierleben* and the books of travelers and explorers. The scope of the book embraces the whole animal kingdom. There is not much theoretical discussion; the book is devoted predominantly to facts arranged under the several topics included in it, the chief of which are: (1) associations, reproduction, and social instincts in solitary animals; (2) societies, reproduction, relations between the sexes and between

parents and offspring, behavior of animals prevented from breeding, behavior outside the breeding season, insect states, closed and open societies, mutual help and harm, courtship, play, mutual understanding and imitation, human sociology from a biological standpoint. Bibliography, about 85 titles.—*F. A. Pattie* (Harvard).

3426. **[Anon.] The intelligence of dogs.** *Lancet*, 1928, **214**, 868.—A discussion of article by Warden and Warner in *Quarterly Review of Biology*, 1928, 3, No. 1.—*W. T. Heron* (Minnesota).

3427. **Avery, G. T. Responses of foetal guinea pigs prematurely delivered.** *Genetic Psychol. Monog.*, 1928, **3**, No. 4, 247–331.—The purpose of this investigation was to ascertain the nature of fetal responses of guinea pigs and thereby to throw some light on the problem of congenital *vs.* acquired pattern responses. Litters from 110 females were observed; the fetuses were delivered by Caesarian operation, beginning with the 45th day of gestation. The size of the litter, bodily development and vital functions were observed, as well as the following responses: twitch to electrical stimulus, gasp reflex to electrical stimulus, external ear open, kicking responses to pressure-pain stimuli, spontaneous kicking, the visual receptors, pain responses to needle, lid reflex, vocal responses, scratch reflex, response to heat stimuli, pupillary reflex, side to back movements, movement to haunches, crawling, swallowing, auditory responses, responses to olfactory stimuli, spontaneous scratch reaction, standing, walking, responses of withdrawal, running to kind, suckling, and several miscellaneous responses. As a general conclusion regarding these responses the author says: "It has been customary in the past to trace back the responses of animals to the time of birth. This study demonstrates that a large number of responses may be evoked in the guinea pig long before the end of the gestation period. Because of the uniformity of their temporal order of appearance in different litters it is possible to plot their day of incidence in the form of a curve. These results substantiate the belief that certain congenital response mechanisms exist in foetal and new-born guinea pigs." Radiograms of 63-day fetuses *in utero* reveal no orientation with respect to gravity, although the same fetuses were very active and rolled to their feet when placed on their sides after being removed experimentally shortly after. Bibliography of 26 titles.—*L. M. Harden* (Clark).

3428. **Courbon, P. Du comportement des mammifères pendant la puerperalité.** (Concerning the behavior of mammals during the puerperium.) *J. de psychol.*, 1928, **25**, 430–439.—Three cats, mother, daughter, and grandmother, while living in a natural habitat, were observed during the puerperal period, among themselves, with their young, and with adult females of other species. There was a marked increase in the sociability of the cats with the onset of puerperality. During the suckling period it was observed that "The grandmother sucks none of the others, but is sucked by her two; the mother sucks only the grandmother, who is her actual mother, and is sucked only by the daughter; the daughter sucks indiscriminately its mother and its grandmother, but is sucked by neither." The females behaved more maternally toward the young of their own species as the time for delivery approached. Young rabbits placed in the presence of the cats were almost immediately maltreated. During the puerperal period the cats manifested, more than at other times, the ability to unite against a strange animal, in this instance a dog. The behavior observed during the puerperium is discussed by the author from three points of view, viz., the anthropomorphic, the mechanical, and the endocrinal. He finds evidence for an instinct of association, a family instinct, and a maternal instinct. Intelligence seems to be heightened at the time of the puerperium.—*N. L. Munn* (Clark).

3429. **Goering, J. H. An experimental analysis of the motor-cell columns in the cervical enlargement of the spinal cord in the albino rat.** *J. Comp. Neur.*, 1928, **46**, 125–151.—Seven figures. By sectioning specific nerves of the

brachial plexus in rats the author sought to determine the localization of motor cell columns in the cervical enlargement of the spinal cord. The Nissl method of studying cell degeneration after the sectioning of nerve trunks was employed. He found five linear motor-cell columns. The individual columns were thought to be functionally correlated with the simple muscular actions of flexion, extension, rotation, and possibly adduction.—*C. P. Stone* (Institute for Juvenile Research).

3430. **Johnson, M. Monkey tricks and traits.** *Delineator*, 1928, **113**, 19; 84–85.—A naturalist's observations on the parental and nesting behavior of the Chacma baboon.—*W. S. Hunter* (Clark).

3431. **Fischer, E., & Fischer, P. Observations et expériences sur les évolutions des mouches pendant le vol. Les réactions au mouvement.** (Observations and experiments on the evolutions of flies during flight. Reactions to movement.) *Bull. biol. Fr. et Belg.*, 1927, **61**, 397–427.—In winged insects at rest as well as in motion, it is the sight of movement which deflects or orients the flight toward the opposite direction. In the insect, whether the flight is to a fixed point or whether it effects a trajectory, the sight of movement brings two different reactions according to the angular speed of the object. If the angular speed is slight, there is a lateral displacement with return to the fixed point, or, in the case of non-stationary flight, with change of direction. If the angular speed is great, the insect is precipitated toward the moving object. These are probably the reactions to movement which, in the gatherings of flies or gnats, create the centers of attraction, where the swarms thus formed show only the effects resulting from individual reactions.—*Math. H. Piéron* (Sorbonne).

3432. **Hinsche, G. Über Umdrehreaktionen bei Bufo vulgaris und Pelobates fuscus.** (On the self-righting reaction in *Bufo vulgaris* and *Pelobates fuscus*.) *Biol. Zentbl.*, 1928, **48**, 449–459.—The analysis of all self-turning reactions leaves much to be desired. To overcome this defect we must first have more adequate descriptions of the reactions involved. The author has made careful observations and geometric measurements of the self-righting reaction in and out of water in the two animals.—*J. F. Brown* (Yale).

3433. **Jenkins, M. The effect of segregation on the sex behavior of the white rat as measured by the obstruction method.** *Genetic Psychol. Monog.*, 1928, **3**, No. 6, 461–571.—The purpose of this investigation was to determine the effect of sex segregation upon the strength of the sex drive in the white rat and the relative incentive value of various kinds of stimuli. The age of the animals at the time of testing was approximately 185 days. The apparatus was the modified grill with an improved device for manipulatory control. The incentives were a male, a receptive female, and a non-receptive female. Four segregation periods were used, 0 days (unsegregated), 1 day, 35 days, and 155 days. All animals had had opportunity to copulate except those of the 155-day groups, which were segregated at the age of 30 days, i.e., before puberty. Of the male test animals 10 of each group were given a 2-hour interval of sex activity 24 hours before testing, while 10 were kept segregated until the time of testing. For females the 1-day group was impracticable, as was also the condition of giving the 2-hour interval of sex activity before testing, because of the character of the oestrous cycle. Part of the 155-day group, however, was given an opportunity to become familiar with the male as a sex stimulus. Data as to crossings of the grill show for the male (1) that for unsegregated animals all three incentives are about equally effective, (2) that 1 day's segregation doubles the number of crossings to the receptive female, and increases materially the number of crossings to the non-receptive female, (3) that segregation before puberty produces a subnormal sex drive, more crossings occurring to the male than to either the receptive or the non-receptive female. The 2-hour mating period seems to counteract in part the decrease in the normal drive resulting from

segregation, to cause the 35-day group to become sexually more active to the male as well as to the female incentive, and to decrease homosexuality in the 155-day group. For the females the 35-day period of segregation does not appear to decrease the sex drive to the male. Segregation before puberty weakens the drive for the male incentive and produces homosexual tendencies. Five copulatory responses one hour before the test have no effect in changing the direction of the homosexual drive, but decrease the drive to the normal incentive. A bibliography of 16 titles and abstracts in French, German and Russian conclude the monograph.—*L. M. Harden* (Clark).

3434. **Kao, H. Sexual receptivity in pregnant rabbits.** *J. Genet. Psychol.*, 1928, **35**, 327–328.—3 cases described.—*J. F. Dashiell* (North Carolina).

3435. **Kearton, C. My happy chimpanzee.** New York: Dodd, Mead, 1928, Pp. 125. $1.00.—*W. S. Hunter* (Clark).

3436. **Langworthy, O. R. The behavior of pouch-young opossums correlated with the myelinization of tracts in the nervous system.** *J. Comp. Neur.*, 1928, **46**, 201–240.—Three heliotype plates; 10 figures. The opossum, after somewhat less than two weeks of gestation, is born and thereafter leads an individual existence in the mother's pouch and attached to the mother's nipple. In this manner it undergoes a long series of developmental changes which roughly correspond to the changes normally undergone in intrauterine life by fetuses of the mammalian forms. In this extensive study the author has correlated the progressive growth of behavior in the pouch-young opossum with progressive stages of myelinization of the neural fibers. Samples of his results follow: (1) Pouch young less than four weeks of age: At birth the young scramble into the abdominal pouch by clutching the mother's abdominal hair with the forelimbs; no assistance from hind legs or tail. Head movements bring mouth, a mere hole without even the lateral groves, over nipple; vigorous sucking responses and firm hold of nipple maintained. No eye slits apparent; deaf; no righting responses; always lies on side rather than on abdomen. Responds to tactual, heat, and cold stimuli when applied anywhere on the body. Tactual stimuli in facial region provoke sucking movements and head turning in the direction of the stimulus. Crawls toward warm area and away from cold area. No scratch reflexes; cannot swim. Only members of body capable of coordinated movement are the head, tail and forelimbs. No coordinated movements of fore and hind limbs. At this stage probably no myelinated nervous processes are to be found. (2) Pouch young 36 days of age: Vibrissae but no fur. Blind and deaf. No righting reflex; a little coordination between fore and hind limbs; reflex movements of legs to tactual and painful stimuli. Could almost support its weight by tail. Head movements and sucking responses still elicited by tactual stimuli in region of face. Responds to cutaneous stimulation as in the preceding age. Myelinization of the cord is very slight. It occurs first in the fibers of the ventral roots and ventral columns. At this age these fibers are scattered and short, probably making only segmental connections; no long tracts connecting spinal cord with the brain. The brain stem likewise has few myelinated fibers. The vestibular nerve alone of the cranial nerves has some myelinated fibers. A few fibers of the medial longitudinal fasciculus, which is associated with the vestibular mechanism, also are myelinated. Almost no efferent fibers are found myelinated at this stage. Evidently ability to perform at least a narrow range of movements in response to cutaneous stimuli is possible without myelinated nerve fibers. (3) Pouch young of 41 days: Eyes not open. Righting response beginning to develop; can balance and take two or three steps when put on its feet; still lies on side, however, when not manipulated. Utters shrill, high-pitched cries. Movements of hind limbs are still poorly coordinated. No movements of facial or masticatory muscles can be elicited. Myelinization of the cord is now quite apparent. Ventral root fibers are well medullated,

but only a few of the dorsal fibers are medullated. Short inter-segmental fibers have almost their full complement of myelin. The greatest maturity of myelinization is found in the cervical region; it becomes progressively less as one goes caudally. The medial longitudinal fasciculus and vestibulo-spinal fibers from the brain to the cord are becoming medullated, but no afferent tract to the brain is becoming medullated as yet. The brain stem shows little advance over that of the preceding age. A few myelinated fibers are now apparent in the 3d, 4th, 5th, and 6th nerves. Only the 7th, however, is well medullated. The tracts associated with vestibular functions are now showing progressively more myelinization. The author thus continues his account of behavior levels and degrees of myelinization of nerve fibers through the ages of 46, 54, 56, 62, 64, 68, and 76 days. General conclusions: (1) Complex reflex and locomotor responses are exhibited by the pouch-young opossum, before any myelinated fibers are present in the nervous system. (2) In general, the axons of motor nuclei become myelinated before the afferent neurons with which they are functionally connected. (3) In the case of purely sensory tracts, fibers of the primary neurons are medullated before the secondary neurons, and these in turn before the tertiary neurons. (4) Fibers and tracts become medullated roughly in the order in which they have developed phylogenetically. (5) By and large there is a fairly high degree of temporal correlation between medullation of nerve tracts and the time they become functional.—*C. P. Stone* (Institute for Juvenile Research).

3437. **Looper, J. B. Observations on the food reactions of *Actinophrys* Sol.** *Biol. Bull.*, 1928, **54**, 485–502.—A number of detailed observations which bring the author to the conclusion that this animal is capable of a certain degree of discrimination in the taking of food. It was found that several of the animals would form a temporary colony to deal with large and active objects of prey. He suggests that this cooperation of uni-cellular animals may have been the method by means of which the multi-cellular animals came into existence.—*W. T. Heron* (Minnesota).

3438. **Palau, A. L. Notes psychologiques sur le rat blanc.** (Psychological notes on the white rat.) *J. de Psychol.*, 1928, **25**, 440–443.—A number of observations upon white rats under conditions of comparative liberty. The marital instinct and individual aptitudes of various animals are discussed.—*N. L. Munn* (Clark).

3439. **Piéron, H. Gravitational sensitivity and geotropic reactions in slugs: an analysis of the laws of excitation and of the internal factors in reaction.** *J. Genet. Psychol.*, 1928, **35**, 3–17.—Crozier and his students had proposed the hypothesis that the geotropic behavior of mollusks and also of rats is due to direct action of gravity upon the musculature; and they had enunciated the law that the angular change of an animal's orientation on a plane inclined perpendicularly to the direction of its original progress increases as the log of the sine of the plane's angle of inclination (see also II: 106). Piéron, working on inclined glass plates with slugs, the geotropism of which was increased by immersion, found the proposed hypothesis inadequate to his data; and he holds that the law of Crozier does not really apply to sensitivity *per se*, but to the tendency to geotropic reaction. Importance is given to the distinction between a receptive process, on the one hand, and the more inclusive tropic process in which a number of receptive and other processes play parts on the other hand. This is offered as a criticism directed at the Loeb school.—*J. F. Dashiell* (North Carolina).

3440. **Rau, P. The honey-gathering habits of *Polistes* wasps.** *Biol. Bull.*, 1928, **54**, 503–519.—A large number of detailed observations of the habits of wasps. Added to these is an interesting interpretation by the author concerning the evolution of certain food instincts as, for example, the storing of honey by the honey bee.—*W. T. Heron* (Minnesota).

3441. **Riese, W. Über des Vorderhirn des Walfötus.** (On the forebrain of the whale fetus.) *Anat. Anz.*, 1928, **65**, 255–260.—*J. F. Brown* (Yale).

3442. **Robertson, J. A. Reaction of *Polycelis* in relation to physiological polarity.** *Biol. Zentbl.*, 1928, **48**, 427–431.—Observations on *Polycelis*, normal and decapitate, which tend to corroborate the author's modified form of Child's theory of the physiological gradient as against Loeb's galvanotropism.—*J. F. Brown* (Yale).

3443. **Stone, C. P. A rabbit cage designed for use in small laboratory rooms.** *J. Genet. Psychol.*, 1928, **35**, 325–327.—*J. F. Dashiell* (North Carolina).

3444. **Visscher, J. P., & Luce, R. H. Reactions of the cyprid larvae of barnacles to light with special reference to spectral colors.** *Biol. Bull.*, 1928, **54**, 336–350.—A method is described whereby a relatively pure monochromatic light is obtained and at the same time it is possible to equate the radiant energy of the various wave lengths. Consequently, the authors are certain that the differences in the reaction of the animals are caused solely by differences in wave length. With the particular animal used it was found that "there is a fairly wide region in the spectrum from 505 to 590$\mu\mu$ or from light blue to yellow, where the stimulating efficiency is equal to, or more than 50 per cent. of white light." That is, when a number of the animals are exposed simultaneously to white light and the colored light 50% or more of the animals (non-reacting animals not counted) will be found in the colored light after a standard length of exposure. The region of maximal stimulating value is the light green from 530 to 545$\mu\mu$. The stimulating value here is from 90 to 94%. These animals were all dark-adapted before exposure to the light. The authors do not believe, however, that there is "true color vision in these lower forms—in the usual interpretation of the term, but rather that the photo-sensitive materials in the light perceiving organs are more sensitive to the effects of certain wavelengths than to others. Increased intensity of other wavelengths may produce similar results."—*W. T. Heron* (Minnesota).

3445. **Warden, C. J. The ability of "Fellow," famous German shepherd dog, to understand language.** *J. Genet. Psychol.*, 1928, **35**, 330–331.—A note summarizing a fuller report in the *Quarterly Review of Biology* on tests given a dog highly responsive to sounds. Visual cues were proven unnecessary to the performances.—*J. F. Dashiell* (North Carolina).

3446. **Warner, L. H. A study of thirst behavior in the white rat by means of the obstruction method.** *J. Genet. Psychol.*, 1928, **35**, 178–192.—This study is made comparable with other studies in hunger and sex drives, by the use in common of the obstruction method, in which the motivated animal is forced to cross an electric grid to reach the object that will satisfy its drive. Quantitative measurement of strength of the drive can be made in terms of current strength and in terms of the animal's crossings, contacts, and approaches to the grid. Groups of 10 males and 10 females were tested at the following intervals after total water-deprivation: 0, 1, 2, 4, and 6 days. Tables and graphs showing the frequency of crossings, contacts, and approaches at these various intervals show that the drive is most operative after one day of deprivation, and diminishes constantly until death. Compared with hunger and sex drives, thirst is shown to be slightly stronger than the former and much stronger than the latter.—*J. F. Dashiell* (North Carolina).

3447. **Weaver, H. E., & Stone, C. P. The relative ability of blind and normal rats in maze learning.** *J. Genet. Psychol.*, 1928, **35**, 157–177.—19 blind rats, 12 litter-mate controls, and 54 non-litter-mate controls, were trained in a multiple-T maze, the criterion of learning being the number of trials when an animal had completed 3 consecutive runs in which the gross error score was 3 or less errors. This criterion was met by the blind and by the litter-mate

controls by the 15th trial, on the average, and by the non-litter-mate controls by the 13th trial. As to form, both error and time curves differed little for the three groups; and as to level, those for the blind and litter-mate controls differed little. No significant group differences in variability were found. The blind animals showed no loss of vigor and aggressiveness. It is concluded that the problem of learning a maze of the multiple-T type is much the same for a blind animal as for one with vision.—*J. F. Dashiell* (North Carolina).

3448. **Wheeler, W. M. Foibles of insects and men.** New York: Knopf, 1928. Pp. 254. $6.00.—*W. S. Hunter* (Clark).

3449. **Yoshioka, J. G. Pattern versus frequency and recency factors in maze learning.** *J. Genet. Psychol.*, 1928, **35**, 193–200.—21 rats were run in a maze of three pathways joined in the form of an equilateral triangular star, with a food box at each end. A rat starting from one end had a choice at the center, and after reaching a food box and eating the food he would return to the center and again be presented with a choice. A choice now of the path originally run would be favored by frequency-recency, a choice of the other would be favored by preferential pattern of turning-right or turning-left as shown in preceding choice. Of the total of 18 choices allowed, the average number made according to preferential pattern was 14.66, the average according to frequency-recency was 3.33. Persistence of the preferential pattern factor was shown by the high frequency of pattern choices twice in succession, and by high correlations between the initial and the final patterns. Preferential pattern is thus indicated as a dominant factor in maze running.—*J. F. Dashiell* (North Carolina).

3450. **Young, P. T. Precautions in animal experimentation.** *Psychol. Bull.*, 1928, **25**, 487–489.—Resolutions by the Committee on Precautions in Animal Experimentation.—*J. F. Dashiell* (North Carolina).

[See also abstracts 3397, 3398.]

EVOLUTION AND HEREDITY

3451. **Allan, W. The inheritance of migraine.** *Eug. News*, 1928, **13**, 100–101.—The author concludes from the data which he presents that migraine is a dominant trait.—*B. S. Burks* (Stanford).

3452. **Altenburg, E. How we inherit.** New York: Holt, 1928. Pp. 280. $2.00.—*W. S. Hunter* (Clark).

3453. **[Anon.] Plans of the Eugenics Survey of Vermont.** *Eug. News*, 1928, **13**, 94–95.—A three year program is briefly outlined.—*B. S. Burks* (Stanford).

3454. **Butt, N. I., & Nelson, L. Education and size of family.** *J. Hered.*, 1928, **19**, 327–330.—The correlation between years of formal schooling and fecundity for 855 Utah parents (of both sexes) is –.09. A more substantial relationship prevails between fecundity and occupational status. The mean number of children per male wage earner was found to be 5.0 for the professional group, 6.0 for business men, 6.3 for farmers, and 5.7 for laborers.—*B. S. Burks* (Stanford).

3455. **Condorcet, —. Historical view of the progress of the human mind. Part I.** Hanover, N. H.: Sociological Press, 1927.—*W. S. Hunter* (Clark).

3456. **Conklin, F. E., & Perkins, H. F. How large families do feeble-minded parents have?** *Eug. News*, 1928, **13**, 92–93.—In connection with a Eugenics Survey of Vermont, data were obtained upon 6000 individuals belonging to socially inadequate families. Feeble-minded children were found in 42.8% of the families. The average number of children in families having one or both parents feeble-minded or insane was 3.5, as contrasted with 3.04 in families not known to have a feeble-minded or insane parent.—*B. S. Burks* (Stanford).

3457. **Davenport, C. B. Race crossing in Jamaica.** *Scient. Mo.*, 1928, **26**, 225–238.—One hundred each of negroes, whites, and hybrids, were given a variety of anthropometric measurements, Seashore tests of pitch discrimination and rhythm, several performance tests of intelligence, and the Army Alpha. Definite differences between blacks and whites are indicated on nearly all tests; the hybrids approaching the one or the other extreme on different tests, but showing in general greater variability.—*J. F. Dashiell* (North Carolina).

3458. **Davis, R. A. The influence of heredity on the mentality of orphan children.** *Brit. J. Psychol.*, 1928, **19**, 44–59.—The Dearborn and Haggerty group tests were given to over 1000 orphanage children and to 500 public school children in Texas. It was found (1) that siblings brought up at home resemble each other more closely than do siblings who have been in orphanages for some considerable time; (2) that, though the results are indefinite, orphanage brothers resemble each other more closely than orphanage sisters, or brothers and sisters, while in public schools there is most resemblance between brothers and sisters; and (3) that there is no evidence to support the view that environment is a determining factor in shaping the mental resemblance of siblings.—*H. Banister* (Cambridge, England).

3459. **DeGrange, McQ. [Ed. and Trans.] On the progress of the human mind. Turgot's second Sorbonne Lecture of 1850.** Hanover, N. H.: Sociological Press, 1927. $0.15.—*W. S. Hunter* (Clark).

3460. **Himes, N. E. The eugenic significance of the work of the English birth control clinics.** *Eug. News*, 1928, **13**, 95–96.—There is reason to believe that the English birth control clinics are functioning eugenically, since they are reaching in a large measure the general population possessed of dull-normal intelligence.—*B. S. Burks* (Stanford).

3461. **Jones, D. F. Like father like son-in-law.** *Scient. Mo.*, 1928, **26**, 557–560.—Data from Pearson and Lee's study show that like tends to mate with like. This is shown also in many sub-human animal forms, from *Paramecium* to sheep and deer, and in many plant forms.—*J. F. Dashiell* (North Carolina).

3462. **Leavitt, F. H. Cerebellar tumors occurring in identical twins.** *Arch. Neur. & Psychiat.*, 1928, **19**, 617–622.—The author believes that the identical occurrence of cerebellar tumors in monozygotic twins may be construed as evidence strongly supporting the fetal rest theory of the neoplastic tissue. In the case which he reports he is of the opinion that both these tumors were due to a fetal rest of embryonic tissue remaining as a pathologic nidus in the roof of the fourth ventricle of each twin, remaining there in a quiescent state from the time of the splitting of the original single ovum until some years later when some factor stimulated the pathologic growth of this group of embryonic cells in each twin.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3463. **Mills, C. K. Evolution and the Darwinian theory of human descent.** *Arch. Neur. & Psychiat.*, 1928, **19**, 969–980.—A defense of the Darwinian idea of the descent of man as taught by Arthur Keith, based upon the author's investigations of the morphologic and anatomic differences and similarities among human brains and those of primates.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3464. **Popenoe, P. Inheritance of age of onset of menstruation.** *Eug. News*, 1928, **13**, 101.—The author finds a correlation between mothers and daughters of .40 ± .03; between sisters of .39 ± .03.—*B. S. Burks* (Stanford).

3465. **Popenoe, P. Progress in the study of eugenic sterilization in California.** *Eug. News*, 1928, **13**, 101–102.—A brief summary.—*B. S. Burks* (Stanford).

3466. **Popenoe, P. Eugenic sterilization in California. 8. Menstruation and salpingectomy among the feeble-minded.** *J. Genet. Psychol.*, 1928, **35**, 303–311.—2500 insane and feeble-minded women who had submitted to salpingec-

tomy were studied as to menstruation. No correlation was found between menstrual irregularity and degree of defect; but some greater irregularity was found among these patients than among students, traceable to several causes. Married women among feeble-minded, insane, and normal had less irregularity. Irregularity was related to dysmenorrhea, but the latter is not fairly traceable to salpingectomy. The beginning of menstruation was not related to level of intelligence but was to the development of teeth, and it was not in relation to the age of the menopause.—*J. F. Dashiell* (North Carolina).

3467. **Popenoe, P. Eugenic sterilization in California. Attitude of the patient's relatives toward the operation. Attitude of patients toward the operation.** *J. Soc. Hygiene*, 1928, **14**, 271–285.—Relatives have consented to the operation of insane or feeble-minded patients for sterilization in three-fourths of over 2000 cases; in the remaining cases there often are no relatives. No serious friction in the family has been caused by sterilization, according to a favorable report by 22 social workers. Of 821 patients circularized in reference to their attitude regarding the results of sterilization 173 answered, 132 replied they were pleased; 22, that they were indifferent; and 19, that they were not satisfied. Of 22 social workers who had dealt with sterilized patients, 19 knew of no case of serious dissatisfaction.—*D. Grauer* (Chicago, Ill.).

3468. **Whitney, L. F. A study of the size of families of the borderline class.** *Eug. News*, 1928, **13**, 96.—Italian families furnishing a large proportion of children in schools for subnormals in an eastern city averaged 7.09 children per family.—*B. S. Burks* (Stanford).

3469. **Willoughby, R. R. Cross-cousin marriages and population stabilization.** *J. Genet. Psychol.*, 1928, **35**, 129–131.—A note on the predictable effect of a cross-cousin marriage system upon the population mean of a given trait, studied with an artificial population subjected to treatment in terms of statistical probabilities.—*J. F. Dashiell* (North Carolina).

3470. **Willoughby, R. R. A method for approximating genetic constitutions.** *J. Genet. Psychol.*, 1928, **35**, 131–134.—For the theoretical determination of genetic constitution, especially in rapidly-breeding organisms, the method of artificial populations with postulated zygote values for a limited number of genes, and rechecked by real observations, is suggested.—*J. F. Dashiell* (North Carolina).

3471. **Woods, F. A. Successful men have larger families.** *J. Hered.* 1928, **19**, 271–279.—"As far as heredity goes, there is a tendency to conserve rather than to decrease the human strains of greatest ability and of greatest moral worth. Such is found true in the three groups: royalty, American college graduates and British nobility. Those individuals who have more than average mental and moral ratings have more than the average number of children, rather than less than the average."—*B. S. Burks* (Stanford).

[See also abstracts 3398, 3517, 3592, 3686.]

SPECIAL MENTAL CONDITIONS

3472. **[Anon.] Psychology of anaesthesia.** *Lancet*, 1928, **214**, 1133.—A discussion of a lecture by Buxton delivered at the Royal Dental Hospital and reported in *British Dental Journal*, 1928, **49**, 405.—*W. T. Heron* (Minnesota).

3473. **[Anon.] The evolution of a heresy.** *Lancet*, 1928, **214**, 1130–1131.—A discussion of various views taken toward psychoanalysis, and a plea for "an informed criticism which is the breath of life to any developing theory."—*W. T. Heron* (Minnesota).

3474. **[Anon.] Women's work during the menstrual period.** *Lancet*, 1928, **214**, 712.—A discussion of the work of Cullis, Clow, Hollingworth, and Sowton on this question.—*W. T. Heron* (Minnesota).

3475. **Bagby, E. The psychology of personality: an analysis of common emotional disorders.** New York: Holt, 1928. Pp. viii +236. $2.50; student's ed., $2.00.—"The Psychology of Personality is a study of persistent emotional tendencies. It is a comparatively new department of the general science of Psychology. . . . Attention is called to the fact that the processes shown by grossly disordered persons are identical in general nature with those exhibited by 'average' individuals. . . . It has been necessary to develop certain novel concepts, such as the 'tension-reduction principle,' because no useful treatment of the 'drive' has yet appeared in the literature." The introductory chapters concern "activity levels" and the factors (chemical, appetitive-eliminative, and emotional) which determine them, conditioned emotional reactions, disabling fears, the process of repression, and the explanation of the tension-reduction principle. The following manifestations of personality disorders are discussed from the standpoint of genesis, course of development and treatment: manic-depressive reactions, compulsions, worry, defense reactions, rationalization, inferiority complexes, delusions, day-dreaming, seclusiveness, fugues, alternating personality, and hysterical traits. Descriptive notes of illustrative case material are added. A criticism is made of a frequent tendency in current clinical practice to consider that all forms of personality disorders represent the functioning of a single type of psychological process. "A greater measure of success opens to those who are well acquainted with the numerous processes which may function disadvantageously."—*L. Ackerson* (Institute for Juvenile Research).

3476. **Barry, H., Jr. The rôle of subject-matter in individual differences in humor.** *J. Genet. Psychol.*, 1928, **35**, 112–128.—Two subjects were found to be amused by distinctly different types of jokes. Word-association technique and *Ausfragemethode* brought out the existence of constellations and of repression tendencies. It is concluded that humor may be due to change from unpleasantly toned perception to neutrality or pleasantly toned, and that incongruity is only an incidental factor.—*J. F. Dashiell* (North Carolina).

3477. **Baudouin, C. L'inconscient dans la contemplation esthétique.** (The unconscious in esthetic contemplation.) *Arch. de psychol.*, 1928, **21**. 55–75.—The method of association of ideas can serve to bring out the subconscious reaction of the contemplator (as opposed to the creator) to a work of art (a poem, a reproduction of a picture). For this purpose the subject brought to the experimenter a work of art which he preferred or one which he had chosen from a certain number. The subject gave associations for the whole work or for freely chosen details. In order to be able to judge the relations between the personality and the reaction which was brought about, it was necessary that the person and the whole of his subconscious life be known. The experiments were always made in the course of analyses, the subject making associations for a work of art in a seance as he would do for a dream. The results of these different observations, of which four are explained in detail, showed that on several occasions a work of art served the same purpose as a dream. The work of art appeared constructed of symbols chosen by the contemplator himself. The conformity of the work to the subconsciousness of the subject was particularly evident when the subject himself had chosen the work. The analogy between the material furnished by the dream and that procured from the work of art emphasized the following points: (1) The subject made unconscious allusions to the analysis (dreams of analysis); (2) most of the relations of the personal psychological situations to the work of art were not perceived by the subject; (3) the projection into the work of art of the feelings and conflicts, conscious or unconscious, of the subject were not perceived by him; (4) the work of art, like the dream, procured for the subject a symbolic realization of his desires and tendencies; (5) when the subject showed nervous symptoms, the motives projected into the work were related to these symptoms; and (6) the subject projected into

the work not only the conflicts themselves but the efforts at solution and at synthesis (as in certain prospective or anagogic dreams, but in a more marked manner) which contributed in a large measure to the esthetic enjoyment. The extent to which the work of art permitted the unconsciousness of the contemplator to communicate with that of the creator was manifested only if the work contained the collective symbols typical of the primary complexes. A communication was established in the conscious and intellectual region but not in the region of the complexes peculiar to the individual.—*M. R. Lambercier* (Geneva).

3478. **Bender, I. E. Ascendance-submission in relation to certain other factors in personality.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 137–143.—The results of the study are in the main negative. No significant correlation was found in the group between the scores of the ascendance-submission test and the factors of height, weight, intelligence, or scholarship; nor did the median height or the median weight of those highest and lowest in the tests show any significant difference. No reliable differences in the mean scores appear as a result of intelligence, scholarship, position in the family, or class in college.—*C. H. Johnson* (Boston Psychopathic Hospital).

3479. **Bloor, C. Temperament, a survey of psychological theories.** London: Methuen & Co., 1928. Pp. 202. 5/.—A survey of existing theories is offered under the following headings: the classical doctrine; temperament and endocrine glands; temperament and emotionality; temperament and temper; factors of will and perseveration; temperament and analytical psychology; contemporary analysis of personality; temperament in behaviorism. A few suggestions are added for methods for the further study of temperament. There is a note on the rôle of temperament in educational theory and practice. A bibliography is added.—*F. C. Bartlett* (Cambridge, England).

3480. **Bogen, E. Drunkenness. A quantitative study of acute alcoholic intoxication.** *Amer. J. Med. Sci.*, 1928, **176**, 153–167.—"The constancy of the findings as to the concentration of alcohol in the urine and breath to the degree of alcoholic intoxication of the patient" warrants the use of these two measures, together with clinical data, in all attempts to determine the state of alcoholic intoxication. Sixteen tables and charts show relations among symptoms, amount of alcohol in urine, breath, blood, etc. 500 cases were observed, in 250 of which the amount of alcohol in the urine was determined. Several individual cases are reported.—*R. G. Sherwood* (Stillwater, Minn.).

3481. **Bragman, L. J. Ambrose Bierce, purveyor of morbidities.** *Welfare Mag.*, 1928, **19**, 780–782.—The "macabre complex" of the writer Ambrose Bierce is discussed.—*L. Ackerson* (Institute for Juvenile Research).

3482. **Bramwell, M. Hypnotism: its history, practice and theory.** Philadelphia: Lippincott, 1928. (Rev. Ed.) $3.00.—*W. S. Hunter* (Clark).

3483. **David-Neél, A. L'entrainement psychique chez les Thibétains.** (Psychic training among the Tibetans.) *Bull. inst. gen. psychol.*, 1927, No. 4–6, 179–205.—Psychical training in Tibet is primarily of a gymnastic type, aiming to prepare the disciple to scale the heights of understanding and to produce psychic phenomena in consciousness. A very important part of the training consists in respiratory exercises. The end striven for is to arrive at a perfect control of respiration in order to make oneself buoyant and to practice levitation. The Tibetans seek to obtain means of increasing production of internal heat. To accomplish this purpose they remain out-of-doors, naked or nearly so, and concentrate their thoughts on the nervous center, which the Tibetan mystics locate at the level of the navel. They likewise practice anesthesia without drugs and without hypnotic processes. Sensitivity is not entirely abolished, but it is perceived almost like contact in which a thick layer of cotton-wool is placed between the object touched and the skin of the subject. The Tibetans also try to make themselves invisible, a thing which consists for them in not arousing

any sensation in the living beings whom they approach and in leaving no trace in their memory. The subjects who are particularly well endowed, furthermore, succeed in objectivating at will forms conceived in their thoughts. They experience psychic states different from those which are habitual, and they deduce from this fact that one cannot derive certain knowledge from information furnished by sensations. They succeed in creating a god who attends them, the phantom of which is sometimes seen by other persons. The goal fostered by this practice is to teach the disciple that no gods exist except those that he creates by his own thought.—*Math. H. Piéron* (Sorbonne).

3484. **Earp, J. R. Tobacco and scholarship.** *Scient. Mo.*, 1928, **26**, 335–337.—Observations at Antioch College in three different years show a constant difference in scholarship in favor of non-smokers over smokers; but there is no difference in achievement on intelligence tests.—*J. F. Dashiell* (North Carolina).

3485. **Freud, A. Introduction to the technic of child analysis.** (Trans. by L. P. Clark.) Washington: Nervous and Mental Disease Publishing Company, 1928. Pp. 62. $1.50.—See II: 121.—*W. S. Hunter* (Clark).

3486. **Gallichan, W. M. Sexual apathy and coldness in women.** Boston: Stratford, 1928. Pp. 183. $2.50.—*W. S. Hunter* (Clark).

3487. **Hadfield, J. A. The reliability of infantile memories.** *Lancet*, 1928, **214**, 1259–1262.—A discussion of the revival of childhood memories in relation to psychoanalysis. Various sources of error in the interpretation of these memories are discussed. The author believes (1) "that it is possible to recover in memory experiences of infantile life—nor is there any reason why we should not. (2) That confirmation of these experiences can be found not only in objective verification, but in corroboration, and by the effects of the revival of these experiences. (3) That many of these early experiences, whilst themselves true, may become distorted by interpretations of a later time." This article is the substance of an address from the chair at a meeting of the medical section of the British Psychological Society.—*W. T. Heron* (Minnesota).

3488. **House, S. D. Educational psychiatry.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 94–100.—Educational psychiatry is the science of human nature in relation to its potentialities for reeducation. On its practical side, it is interested in "problem" children and "problem" adults with a view to ameliorating their maladjusted relations to themselves and to society. The most influential pioneer in educational psychiatry has been Alfred Adler.—*C. H. Johnson* (Boston Psychopathic Hospital).

3489. **Hunt, J. R. The erethitic and kolytic and their relation to the processes of excitation and inhibition.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 176–181.—Excitation and inhibition play a fundamental rôle in determining the activities and behavior of the individual. The erethitic temperament is a mobile one, characterized by great activity of mind and body (excitation). The kolytic temperament is more calm and controlled, with a tendency to passivity of mind and body (inhibition).—*C. H. Johnson* (Boston Psychopathic Hospital).

3490. **Hunter, J., & Brunner, A. The emotional outlet of gamblers.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 38–39.—As an indirect emotional outlet, the data would indicate that gambling is not closely associated with any clinical group of such indirect outlets. As a group, the gamblers do not present a uniform picture in introversion-extroversion and psychoneurotic tendencies. It is possible that gambling in itself presents a distinct outlet, or is closely related to some clinical grouping not included in the tests used.—*C. H. Johnson* (Boston Psychopathic Hospital).

3491. **Jones, L. J. Presidential address.** *Proc. Soc. Psych. Res.*, 1928, **38**, 17–48.—The author gives an account of experiences that he has had over a period of 25 years with mediums, both professional and non-professional. He concludes that these experiences have given him definite assurance of survival, but that

"it is better to pass on with no fixed ideas as to what we shall find or with whom we shall consort."—*B. S. Burks* (Stanford).

3492. **Kamiat, A. H. A psychology of asceticism.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 223–231.—An ascetic becomes such through a feeling of inadequacy to the demands of life, or a world-phobia, manifested by a tendency toward a flight from the world and from life therein, or an immersion of the self in a fantastic world. These processes, when they exist in accentuated form, constitute psychopathic traits. The question is raised: can the moral overscrupulousness of the ascetic, his tendency to doubt the propriety of pleasure, be set down as a symptom of compulsion neurosis? The tortuous character of the thinking, and the manifest predilection for the expenditure of an enormous amount of energy on frivolous theological questions and quibbles, are both suggestive of the obsessive thinking of the compulsion neurosis.—*C. H. Johnson* (Boston Psychopathic Hospital).

3493. **Kolb, L. Drug addiction.** *Arch. Neur. & Psychiat.*, 1928, **20**, 171–183.—A survey of the personality and life history of a selected group of 119 medical addicts. Analysis of the group is made on the bases of age, addiction dose, cause of addiction, heredity, industrial efficiency, marital relations, crime and treatment.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3494. **Künkel, F. Einführung in die Charakterkunde auf individual-psychologischer Grundlage.** (Introduction to characterology on the basis of individual psychology.) Leipzig: Hirzel, 1928. Pp. viii + 185. Rm. 8, 10.—The book opens with a preliminary empirical definitions of character, the inclusive concept of individual forms of behavior. The author was influenced in this by essentially practical considerations. All factual material which is given is based on the results of individual psychology, and this enables the author to convince his readers by a mass of pertinent observations and self-evident interpretations. The detailed examples of several character analyses illustrate the viewpoints which he adopts. The book answers principally the questions of those interested in everyday problems, psychotherapy, social service and spiritual difficulties. It also sheds light on the problem of the self-education of the individual.—*F. Künkel* (Berlin).

3495. **Low, B. The unconscious in action. Its influence upon education.** London: Univ. London Press, 1928. Pp. 226. 5s.—This volume, which is intended primarily for teachers, demonstrates the bearing of psychoanalysis upon education. The author's purpose is to show the unconscious at work in the school room in the reciprocal transference-resistance reactions between teacher and pupil. She discusses the problem of authority and discipline, the fundamental behavior tendencies as conditioned by unconscious wishes and fantasies, the effect of unconscious emotions upon intellectual processes, the significance of sublimation for education and some modern educational developments from the psychoanalytic standpoint. She shows that intellectual activity is a safety valve for repressed emotions and consequently is very critical of the intelligence tests. Psychoanalytic theories are expounded only so far as they serve to illuminate the educational processes. A pedagogy which makes use of psychoanalytical principles, particularly transference, resistance, unconscious fantasies and sublimation, not only helps the character of the individual pupil and provides a deeper insight for the teacher, but at the same time makes the instincts socially more valuable. The teacher of the future will not leave this pedagogical development to chance, as is done in so many educational theories, but will be guided by a knowledge of the instincts and unconscious mental processes as they have been illuminated through psychoanalysis. There is an introduction by T. P. Nunn, a reference list and a detailed index.—*I. H. Coriat* (Boston).

3496. **Minkowski, E. Du symptome au trouble générateur. Quelques réflexions sur la psychopathologie contemporaine.** (From the symptom to the

generative disorder. Some reflections on contemporary psychopathology.) *Schweiz. Arch. f. Neur. u. Psychiat.*, 1928, **22**, 35–63.—The idea of personality as a living and indivisible unit is taking a more and more important place in psychopathology. One can no longer be content with lining up symptoms, one after another, just as one cannot reconstruct a whole by a juxtaposition of its parts. Therefore it is rather by what is called diagnosis by feeling (*diagnostic par sentiment*) that it has been possible to arrive at the idea of the psychological syndrome, an association of symptoms which are felt to be bound together and to form a unit. The existence in the same syndrome of very different symptoms has given rise to the idea of generative disorders (*troubles générateurs*) constituting the primary psychological lesion. The syndrome thus becomes the expression of a profound and characteristic modification of the entire personality. Along with the syndromes, which are a qualitative notion, the nosological point of view, implying the idea of a quantitative scale of evolution of a specific psychopathological process, is also added to the idea of essential subjacent disorders, though in an inductive fashion. The generative disturbance penetrates into a personality capable of reacting and defending itself in characteristic fashion. It is necessary, therefore, to discriminate between primary disturbances and reactionary disturbances. This idea is reinforced by the idea of constitution and of compensation. The primordial characteristics of the malady may be in reality formed in the constitution (schizophrenia) or may occur only as the foundation of accessory symptoms (general paralysis). The notion of affective compensation (Freud) has thus modified ideas on the pathogenesis of mental disorders and permitted a penetration to the very core of the morbid personality by causing us to go beyond the plan of clinical symptoms. But there is still the necessity for taking into account a phenomenological compensation acting less through the content (with or without an end) than through the form of psychological activity. A provisional table of the generative disorders includes the following: (1) the main psychopathological processes, of which we chiefly know (a) weakening of intelligence, (b) the schizophrenic process, and (c) the epileptic process; and (2) the disorders of a more general nature, influencing the form of mental activity itself, especially in the domains of the affirmations of the self. The author gives the name *subduction mentale morbide* (morbid mental subduction) to these disorders where he compares (1) the degradation of the personality in time (melancholic delirium) and (2) the degradation of the personality in space (Clerambault's syndrome). The patients come to express in an identical fashion psychopathological situations which are quite different in structure. Analysis ought to proceed from the center to the periphery. The notion of a generative disorder will permit psychopathology to state precisely the very form of normal life and its different forms of degradation. It ought to serve, parallel to other recent theories, as a point of departure for organo-psychological hypotheses. Finally, the preceding conceptions lead to what the author calls the double aspect of certain psychopathological phenomena: the ideo-affective aspect which allows us to establish a relation of ideas as a bond of sympathy with the patient, and the structural aspect which constitutes the inmost framework of the syndrome and explains to us why our reasoning no longer has any hold on the delirious ideas of the patient.—*M. R. Lambercier* (Geneva).

3497. **Moragas, J. El moment de Freud.** (Freud's moment, i.e., present significance.) *Criterion*, 1928, **13**, 192–193.—Commentary on inquiry sponsored by René Jolivet (*Candide*, Paris): "La psychanalyse, est-elle un danger?" The author believes that the present reaction against Freudism is due to the fact that psychoanalysis was adopted by literary men as well as by scientists. He refers to opinions of Henri Claude and George Dumas, scientists, who agree as to the value of psychoanalysis in diagnosis and supplementary therapeutics;

he also quotes Jacques Bainville and H. Rosmy, men of letters. The former reminds us that sexuality as literary material is not the invention of Freud, while Rosmy maintains that the influence of psychoanalysis in literature will end the day men realize the advantage of writing "good" books.—*C. Burson* (Newcomb-Tulane).

3498. **Oates, D. W. An experimental study of temperament.** *Brit. J. Psychol.*, 1928, **19**, 1–30.—This investigation was prompted by the marked differences found in the scholastic performances of children of equal intelligence. Group tests—the June Downey Will-Temperament Test and a battery of ten intelligence tests—were given to 50 high school boys, whose scholastic successes were indicated by the marks they obtained in the school examinations. Theoretically there should be eight distinct types of individuals, though few will be found who are not mixtures of all the types. Six boys, whose will-temperament profiles were near type, were fairly accurately described by the traits indicated. The tests do not, however, appear to measure traits which are easily identifiable by teachers. Analysis of the scores in the various tests indicates that there is probably no relationship between temperament and intelligence, as measured by the tests; different groups of qualities are tapped. But a comparison of scholastic success with the temperament scores shows that those who obtain average total temperament scores achieve scholastic success on a level with their intelligence, while those who obtain high or low temperament scores may do either better or worse in scholastic tests than their intelligence would lead one to expect. Four will-temperament tests in particular—coordination of impulses, motor inhibition, self confidence, and finality of judgment—appear to have value in predicting success or failure in school studies. The criterion for a general factor operating in will-temperament tests is not satisfied, but there appears to be a group factor of wide generality.—*H. Banister* (Cambridge, England).

3499. **Odier, C. Curiosité morbide.** (Morbid curiosity.) *Arch. de Psychol.*, 1928, **21**, 76–92.—Parents often deceive their children regarding sex and procreation, or they systematically refrain from all instruction in this field. Various conflicts may result from this behavior, called complexes of puberty, which, if they are not resolved, may become a part of the psychological etiology of certain adult neuroses. Among these disorders the castration complex is common in feminine neuroses. It consists in this painful idea: the young girl or woman believes that she has been deprived of the characteristic of the male sex as the result of a bloody operation or a cruel assault. These ideas are logically confirmed by the appearance of a flow of blood at the time of puberty. Moreover, the affective energy which the child brings to bear on these questions may undergo a displacement (Freud's *Verschiebung*) and be transferred to other objects or persons. All this may bring on mythomania, various character disorders, and phobias. The author cites the case of a young girl, Colette, 11 years of age, whose character was completely changed and who showed, moreover, an incredible curiosity which was revealed in all her actions. The psychoanalyst, being a new acquaintance, neutral, and invested with authority (qualities which the parents lacked), was able to win the confidence of the child. He quickly discovered that the origin of this morbid curiosity lay in Colette's need of instruction in the catamenial functions. This curiosity has been gradually changed into a general abstract idea: that there was a secret known to adults and jealously guarded by them. Besides having her character changed and becoming mythomaniacal, Colette showed negative feelings and compensatory masculine behavior (joy in wearing boys' trousers, rejecting dolls for mechanical things), quite characteristic of her suppression of femininity. Lastly, the child feared greatly the introduction of any kind of medical instrument (thermometer, dentists' forceps, etc.) into any natural cavity of her body, a phobia which could be related to a symbolization of coition. By bringing back the question to its real

object and by satisfying conditions by a simple and exact explanation of the sexual matters, Colette, at the end of two seances, was restored to her normal behavior. This case corresponds very well to that of a woman, 35 years of age, the fundamental symptom of whose psychoneurosis had as its origin the fact that her parents had deceived her concerning the facts of birth. The author thinks that the period of puberty tends to rekindle and exacerbate the early conflicts which date from the first 5 or 6 years of life. His conclusion is that truthful sexual education is a necessary prophylactic measure and is beneficial to the majority of children. This initiation should be made as far as possible by psychiatric physicians. The ages from 9 to 12 are the best, but it is necessary to choose a propitious moment, for which any manifestation of nervous disorder is a valuable guide.—*M. R. Lambercier* (Geneva).

3500. **Paneth, L. Charakter und Erziehbarkeit.** (Character and educability.) Schwerin i. Meckl.: Bahn, 1928. Pp. 20. M. 0.75.—The author begins with a psychophysical unity which is in line with Kretschmer's conception, and decides that character changes during the course of life. In the female, Paneth distinguishes a third crisis in addition to puberty and the climacteric: the transition from girlhood to womanhood at the time of physical motherhood Certain variants are so frequent that one must call them types; for instance, the perpetual college student—a person unable to free himself from a certain developmental stage. The author will not admit antithetical structure as a flaw in character; for instance, the Catholic transcendental change (to use Schopenhauer's expression) is founded on structure and cannot be regarded as a flaw of character. The nucleus of character is surrounded by a layer in which we find repressions and the like. Here education can be of the greatest service. The two main functions of character are the formative and the selective. The former function, which is the more essential in youth, should not be aided by education. But when one aids the selective function one creates adequate experiences for the formative function. Inadequate factual experience leads only to false ideals. We should be able to utilize criminal characters, just as industry has succeeded in employing cripples. In concluding, Paneth gives incentives for contemplation in order that the prototype for which education strives may arise anew.—*A. Römer* (Leipzig).

3501. **Peck, M. W. Psychoanalytic theory of the neuroses.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 182–203.—A male student of 22 years was lacking in normal manifestations of sex interest and sex activity. As a substitute he had for 10 years indulged in masochistic phantasies in which he pictured himself beaten by a powerful man. His social adjustment in general was but little disturbed. Psychoanalytic treatment was carried out over a period of a year. From a clinical standpoint, results were reasonably satisfactory. During the analysis, material was produced in the way of dreams and other mental content which supports and illustrates in a specially clear way the psychoanalytic theory of the psychopathology of perversion and neurosis.—*C. H. Johnson* (Boston Psychopathic Hospital).

3502. **Rich, G. J. A biochemical approach to the study of personality.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 158–175.—Biochemistry offers a fruitful means of studying personality, inasmuch as certain chemical determinations appear to be definitely correlated with personality traits. Preliminary experimentation indicates tendencies for the following relationships to hold: (1) The least excitable individuals tend to have the most acid urine and saliva, while more excitable persons tend toward neutrality or alkalinity of their fluids. (2) The least aggressive subjects appear to excrete the greatest amounts of acid as measured by the formol titration and to have the highest alkali reserve of the blood, while more aggressive individuals seems to show opposite characteristics. (3) Emotional excitability tends to bear an inverse relationship to the

presence of creatinine in the blood and its excretion in the urine. (4) Phosphorus metabolism appears to be bound up with personality in some way, but the details of the relationship are not yet clear. The degree of the relationships found to exist between chemical determinations and personality traits is that expressed by coefficients of correlation between .20 and .30.—*C. H. Johnson* (Boston Psychopathic Hospital).

3503. **Shackle, J. W. A note on night terrors.** *Lancet*, 1928, **214**, 287–288.—There is a distinction between nightmares and night terrors. The former may occur several times on the same night and visual images are usually experienced, the latter occur only once in a night and no visual images are presented. In the case history which is given the night terror was always preceded by an aura in which familiar objects took on a peculiar aspect. The causes of night terrors are not definitely known. "Among these mentioned are rheumatism, anaemia, tubercle, adenoids, and gouty gastritis, whilst some authorities suggest that there is usually a family history of neurosis, eplilepsy, or migraine." The night terrors occur in childhood and the "sensation that predominates is one of overwhelming fear that is out of all proportion to the apparent significance of the stimulus."—*W. T. Heron* (Minnesota).

3504. **Taylor, W. S. Morton Prince and abnormal psychology.** New York: Appleton, 1928. Pp. 137. $1.90.—An exposition and discussion of Morton Prince's contributions to modern psychological theory. The author has based his study upon the writings of Morton Prince, upon observations of students' reactions to his formulations and on other authors' points of view; upon various investigations of functional abnormalities in the light of these views; and especially upon recent and detailed discussions with Prince himself. The following problems, which have been briefly treated, point out Prince's general ideas in regard to his conception of the organism, urges, associations, integration, conflict, dissociation, consciousness, subconsciousness, genesis and types of functional disorders, bases of psychotherapy, and special methods in therapy. Some of the deficiencies and limitations of Prince's system are considered. There is a short historical sketch of the development of his conception and the influences of others on his present views. In concluding the author gives an estimate of the logical and scientific character of Prince's position today. Notes and bibliography.—*R. A. Young* (Boston Psychopathic Hospital).

3505. **Thomas, C. D. The modus operandi of trance communication according to descriptions received through Mrs. Osborne Leonard.** *Proc. Soc. Psych. Res. (E)*, 1928, **38**, 49–100.—These descriptions offer an explanation given by the messages themselves, of their origin and method of transmission, from the "discarnate communicators" through the control and the medium to the sitter who receives the messages; with an account of difficulties encountered *en route*. It appears that some of the messages avoid the control by coming when she has relinquished her place in the medium to one of the communicators themselves; various types of imagery occur; symbolization is frequent; and the difficulties inhere in the modes of experience of the communicators, in connection with the symbolization, in expectation, attention, memory, practice, and unfavorable conditions around the scene of transmission. These conditions include especially "the power," a semi-physical emanation from the medium; the reception in the medium's mind and brain, respectively; the activity of the cooperative mind—partly medium's, partly control's; and the attitude of the sitter.—*W. S. Taylor* (Smith).

3506. **Thompson, D. J. S. The mysteries and secrets of magic.** Philadelphia: Lippincott, 1928. Pp. 337. $3.50.—*W. S. Hunter* (Clark).

3507. **Vetter, G. B. The incest taboos.** *J. Abn. & Soc. Psychol*, 1928, **23**, 232–240.—An article describing the origin of customs and the origin of the rationalization to explain the customs.—*C. H. Johnson* (Boston Psychopathic Hospital).

3508. **Woolley, V. J. The broadcasting experiment in mass-telepathy.** *Proc. Soc. Psych. Res. (E.)*, 1928, **38**, 1–9.—The experimenter showed certain objects to five segregated agents, which Sir Oliver Lodge, from another station and knowing only the classes to which three of the objects belonged, by radio directed the audience of listeners to report any impressions they could of the objects. In the results, "there does seem an indication of a supernormal faculty on the part of a few of those who took part, though their successes are swamped by the very large mass of failures on the part of others." Of considerable psychological interest, however, are the marked preferences shown in guessing playing cards, for example: a tendency to choose an ace, and to favor odd-numbered cards as against even-numbered ones. The main purpose of the paper is to suggest that a control experiment should always be applied by comparing "the number of times that a given object is guessed correctly with the number of times that it is guessed incorrectly in relation to another test."—*W. S. Taylor* (Smith).

[See also abstracts 3353, 3373, 3412, 3509, 3525, 3531, 3565, 3578, 3611, 3625, 3639, 3658, 3740.]

NERVOUS AND MENTAL DISORDERS

3509. **Adler, A. The cause and prevention of neuroses.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 4–11.—Every child and every human being is continually striving to answer questions, to overcome difficulties, to solve riddles, and to develop himself in some degree toward a self-satisfying completion, the full achievement of his life purpose. Man has three great problems to solve. The first is the ambition to mix with and be accepted by others. The second problem is that of occupation, and the third that of sex. Neuroses arise from a failure in any one of these three problems, due to physical deficiencies, the "spoiled child" reaction, or the "unwanted child" reaction. Symptoms are depression, agoraphobia, marked solitude, constant striving for superiority through pettiness, and marked subjective disturbances. In the treatment it is of the greatest importance to find out what mistake has been made in the past, to show what has been to blame for the neurotic attitude to life, and to expose the connections between the attitude and the symptoms.—*C. H. Johnson* (Boston Psychopathic Hospital).

3510. **[Anon.] Mental disabilities and premature birth.** *Lancet*, 1918, **214**, 244.—A discussion of the findings of Carl Looft, who believes that mental retardation is frequently associated with premature birth. It is pointed out that in practically all such cases there are other factors which may be responsible for the retardation.—*W. T. Heron* (Minnesota).

3511. **[Anon.] The incidence of general paralysis.** *Lancet*, 1928, **214**, 350–351.—A discussion of the report of the U. S. Public Health Service with reference to syphilis.—*W. T. Heron* (Minnesota).

3512. **[Anon.] Care of the mentally defective.** *Lancet*, 1928, **214**, 403–404.—A discussion of the Mental Deficiency Act which passed at the last session of the British Parliament. In this act mental defectiveness is defined as "a condition of arrested or incomplete development of mind existing before the age of 18 years, whether arising from inherent causes or induced by disease or injury." The "essential criterion of mental defect is not a defect of intellectual capacity, as this term is usually understood; for mental defect may exist in persons of considerable intellectual capacity. It is an incapacity for efficient social adaptation of such kind and degree as to render the person in need of care, supervision, and control. A person who suffers from any defect of mind, arising before the

age of 18 years, which is sufficient to necessitate external care is a mental defective within the meaning of the act."—*W. T. Heron* (Minnesota).

3513. **[Anon.] Influenza and genius.** *Lancet*, 1928, **214**, 406.—William Hamer brings evidence to show "that influenza years have always inflicted special damage upon the human nervous system, and that the evil effect is most readily discernible in the age-group 0–25." He concludes that the widespread prevalence of influenza has constituted a menace to intellectual progress. It has left its mark on many men of genius; Chopin, Sterne, Swift, Carlyle, and William James, for example. Many remarkable men have lost their lives through influenza, from Shakespeare and Cromwell onwards, and the ravages of the cerebro-spinal trailers are causing us much anxiety today. There is a tendency for men of genius not to be born during years of prevalence of influenza.—*W. T. Heron* (Minnesota).

3514. **[Anon.] The treatment of epilepsy.** *Lancet*, 1927, **213**, 613–614.—A general discussion of various treatments of epilepsy.—*W. T. Heron* (Minnesota).

3515. **[Anon.] Epilepsy.** *Lancet*, 1928, **214**, 711–712.—A brief discussion and summarization of the contents of the 1928 Lumleian Lectures on epilepsy.—*W. T. Heron* (Minnesota).

3516. **[Anon.]. "Aviation sickness."** *Lancet*, 1928, **214**, 714.—A critical discussion of a monograph issued by the International Labour Office (*Occupation and Health Series*, No. 86). "Aviator's neurosis" is described in this monograph.—*W. T. Heron* (Minnesota).

3517. **[Anon.] Sterilisation and mental disease.** *Lancet*, 1928, **214**, 864–5.—The Central Association for Mental Welfare, which is the chief non-official body in England dealing with defectives, after handling 34,000 cases concludes that "whilst sterilisation might be appropriate in certain particular cases, its general adoption would have little preventive effect, that the freedom accompanying it would be attended with positive harm to the defectives themselves, that it would not result in any financial saving, that, in short, the procedure would benefit neither the defectives nor the community."—*W. T. Heron* (Minnesota).

3518. **[Anon.] The treatment of psychoneuroses.** *Lancet*, 1928, **214**, 867.—A discussion of the methods of treatment and the percentages of cure of functional nervous disorders at the Cassel Hospital, Swaylands, Kent, England.—*W. T. Heron* (Minnesota).

3519. **[Anon.] Reading and spelling.** *Lancet*, 1928, **214**, 1132–1133.—A critical discussion of Orton's theory of word-blindness.—*W. T. Heron* (Minnesota).

3520. **[Anon.] Section of mental diseases and neurology.** *Lancet*, 1928, **215**, 340–346.—This is a summary of the remarks of various individuals on the following topics: (1) auto-toxaemia as a factor in the causation of psychoses; (2) cerebral states consequent upon head injuries; (3) early treatment of psychosis in psychoneuroses.—*W. T. Heron* (Minnesota).

3521. **[Anon.] Diploma in psychological medicine.** *Lancet*, 1928, **215**, 421.—A list of institutions in the British Isles which grant diplomas in psychological medicine. The requirements for this diploma are outlined.—*W. T. Heron* (Minnesota).

3522. **Atkinson, E. M. Abscess of the brain: its pathology, diagnosis, and treatment.** *Lancet*, 1928, **214**, 483–488.—Points of chief interest to psychologists in this article are: (1) "A lesion in the temporal lobe results in convulsions of a generalized type, frequently followed by some degree of contra-lateral paresis." (2) "In the frontal lobe they are also generalized, but may start with a conjugate deviation of the head and eyes, while in the parietal lobe they are of Jacksonian type." (3) "In cerebellar lesions fits are not characteristic and are

a late phenomenon." The above conditions are found during the stage of onset of the abscess, and are associated with the abscesses of intracerebral locus. This stage of onset lasts only a day or so and is followed by the latent stage. During this stage "mental changes are very constant, and perhaps the most important of all at this time. A child is apathetic and listless, will not play with his toys and does not resent their being taken away. An adult is drowsy, lacks concentration, and allows his attention to wander; his memory may be faulty and his cerebration slow, so that there is a distinct pause between question and answer, though the answer when it comes is intelligent and correct. A change of disposition is not unusual, the normal good-tempered individual becoming fretful and irritable."—*W. T. Heron* (Minnesota).

3523. **Berry, R. J. A. The Beattie Smith lectures on insanity for 1926. Lecture I, The principles of neurology.** *J. Ment. Sci.*, 1928, **74**, 12–24.—"In every human individual there is an inner or infragranular brain of the animal instincts and activities and an outer or supra-granular brain of control, inhibition and educability. Bolton has shown that the neurons of the latter develop late and are extremely variable in numbers in different individuals; hence it follows that some will react to their social environment on a more nearly animal basis than others, and there thus appears to be an established physical or structural basis for many social problems, such as certain crimes, prostitution and general inefficiency, as well as for many of the insanities. In cases of mental affection, grading from idiots and imbeciles, through various types of amentia, great differences in the thickness and numbers of neurons of the supra-granular cortex have been quite definitely established, both macroscopically and microscopically. In amentia the condition is one of under-development of the cortical layers, particularly the supra-granular, whilst in dementia, there has been a destruction of such cells, and the destruction affects the layers in the reverse order to that of their development, the most affected being the latest developed, and the least affected being the earliest developed."—*E. F. Symmes* (Institute for Child Guidance).

3524. **Berry, R. J. A. The Beattie Smith lectures on insanity for 1926. Lecture II, Application of the principles of neurology to the insanities.** *J. Ment. Sci.*, 1928, **74**, 24–34.—"Present-day conceptions of insanity, both medical and legal, present inconsistencies and errors which can be eliminated only by knowledge based on the sure foundation of structure and function. There is probably no system in the body where normal functioning is so dependent on normal structure as in the nervous system. Hence the key to the pathology of insanity lies in the study of structure quite as much, maybe more, than in that of clinical phenomena. All the phenomena presented by the functioning of the nervous system, from the clinical standpoint, fall into four great groups—namely, absence, diminution, perversion or exaggeration—of the functions of the three great structural divisions of the central nervous systems: receptor neurons, cortical internuncial neurons, and effector neurons with the accompanying functions of sensations, thought, and actions."—*E. F. Symmes* (Institute for Child Guidance).

3525. **Blondel, Ch. La conscience morbide. Essai de psychologie générale.** (Morbid consciousness. An essay in general psychology.) Paris: Alcan, 1928. Pp. 400. 35 fr.—The author has made a systematic appeal to the concepts of contemporary sociology and to the hypothesis of collective representations in order to interpret psychopathological phenomena. Some of the observations related by the author leave the clear impression that the morbid consciousness offers characteristics *sui generis*, and that these states are unintelligible to us directly and escape our experience. There is a fundamental difference between the morbid and the normal consciousness. The characteristic of the normal consciousness is the spontaneous utilization of language and imitation which society

furnishes. But it is necessary to let pass into the unconscious that which each of these conditions has which is strictly individual, purely psychological. There is as irrevocably irreducible to the direct organization of a collective experience only our cenaesthesia. Normal conscious life thus contrives to repress the cenaesthetic material under its own appropriate threshold. But if this repression becomes impossible, at the same time the utilization of the collective frame-work of which this repression is the underlying condition becomes impossible. Then the consciousness, becoming morbid, is incapable of applying itself to the collective exigencies of logic and experience in its various and disconcerting aspects which bring out these morbid disturbances. Between the physiological and the social the psychological is only a transition for the normal consciousness; the morbid consciousness, on the contrary, is arrested and immobile, to the great damage, if not to the complexity of its states, at least to their practical utilization and to their adaptation to the collective conditions which are derived from the same laws of thought and clear consciousness.—*Math. H. Piéron* (Sorbonne).

3526. **Brain, W. R. Posture of the hand in chorea and other states of muscular hypotonia.** *Lancet*, 1928, **214**, 439–441.—*W. T. Heron* (Minnesota).

3527. **Brain, W. R., & Cairns, H. The treatment of the sequels of head injury.** *Lancet*, 1928, **214**, 668–669.—The discussions of interest to the psychologist are with reference to traumatic neurasthenia and traumatic epilepsy. By the former term is meant "a state of anxiety neurosis which occurs in the absence of, or outlasts recovery from, an organic lesion produced by an accident." Treatment by suggestion and physical exercise. The latter term is self-explanatory. Treatment should be primarily medical and along the same lines as treatment for idiopathic epilepsy.—*W. T. Heron* (Minnesota).

3528. **Brain, W. R. The treatment of tic.** *Lancet*, 1928, **214**, 1295–1296.—As a working hypothesis, the tic is considered to be a conditioned response. The practitioner should endeavor to find the answer to these questions: (1) What is the stimulus—i.e., the factor in the patient's environment which evokes the movement? (2) What is the emotional state with which it is associated? (3) What psychological end does the disability serve? In explanation of the last question it is stated that the tic may be used "as a scourge to a repressive parent, a claim upon the pity of friends or a refuge from social obligations." Treatment is by re-education and suggestion, although the latter by itself is not likely to yield a permanent cure. It is very necessary that the tic be treated in childhood. At this age the chances are very good for recovery, but they are very poor if the patient is an adult.—*W. T. Heron* (Minnesota).

3529. **Campbell, K. J. Crime and dementia praecox: A study of the criminal insane to determine the possible relation of crime and dementia praecox.** *Welfare Mag.*, 1928, **19**, 799–805.—A group of criminal schizophrenics at the Central Oklahoma State Hospital, consisting of 29 men and 11 women, were studied from the standpoint of type of dementia praecox, age at onset, type of crime committed, health, stature, weight, cause of psychosis, mental symptoms, and attitude toward the crime committed, and the results tabulated. "The group . . . was of insufficient size to warrant the drawing of any definite conclusions, but the results may serve as an index to the value of further study. . . ." "Criminal schizophrenics seem to lack a moral sense. . . ."—*L. Ackerson* (Institute for Juvenile Research).

3530. **Clark, R. M. The mongol: a new explanation.** *J. Ment. Sci.*, 1928, **74**, 265–269.—Hyperthyroidism affecting the fetus *in utero* may be the underlying cause of mongolism, a congenital form of exophthalmic goiter, which would be the contrast to cretinism, caused by hypothyroidism. There are obvious similarities between exophthalmic goiter and mongolism. In exophthalmic goiter one finds eye, heart, blood-vessel, skin and hair changes and altered metabolism, and in the mongol one finds changes in the same structures with stunted growth,

resulting from altered metabolism. The mongol is undersized, it shows resemblances to former ancestors, it is an "unfinished child," and its mental development shows a parallelism with its physical development. These characters are the results of changes in the eyes, the hands, and the feet, the vertebral column, skull, and brain; hyperthyroidism can account for these features. Experiments on tadpoles shown that feeding of thyroid causes protrusion of the eyes, premature metamorphosis, increase of metabolism, decrease in body weight, and skeletal changes; likewise accelerated maturation of spermatoblasts, and degeneration and death after larger doses. The conclusion is thus drawn that hyperthyroidism is a similar action on the human fetus. The hyperthyroidism may be maternal or fetal in origin, and may be taken to include over-susceptibility of the embryo to the thyroid hormone and over-elaboration of thyroid hormone, owing to the capacity of other tissues of the body to produce it from iodine or other substances."—*E. F. Symmes* (Institute for Child Guidance).

3531. **Clow, A. E. Treatment of disturbances incidental to early menstrual life.** *Lancet*, 1928, **214**, 460–461.—A brief paragraph is included on neurotic disturbances. The occurrence of these symptoms has been overestimated. They are "certainly rare among girls who are expected by their elders to remain well during the period, and are often only detected by those who expect to find them." When the condition actually exists it can generally be cured by "verbal treatment." Prevention of the condition is "in most cases dependent on a sensible upbringing."—*W. T. Heron* (Minnesota).

3532. **Cobb, S. Physiology, psychiatry and the inhibitions.** *Arch. Neur. & Psychiat.*, 1928, **19**, 981–996.—A demonstration of the relation of neurophysiology to psychiatry with a somewhat detailed review of experiments and theories (Weber, Wedensky, Sherrington, Forbes, Pavlov, McDougall, James, Köhler and others) in the concept of inhibitions as an example of this complex relationship.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3533. **Collier, J. Epilepsy.** *Lancet*, 1928, **214**, 587–591.—The first of a series of three lectures, comprising the Lumleian Lectures for 1928. In this lecture the author summarizes a number of the theories concerning the nature of epilepsy. He also discusses the various kinds of the disease. He then states his position that epilepsy is caused by some sort of metabolic disturbance. He gives the lines of evidence by means of which he supports this thesis. The points which he makes and amplifies are as follows: (1) "There is the very common incidence (of epilepsy) in early infancy when the personal metabolism may not as yet be strongly organized, nor the developing brain highly stable, and the very important influence which so definite a metabolic disorder as rickets has in determining the incidence of epilepsy." (2) "It is usual for the epileptic woman to have complete immunity from the attacks during pregnancy, and I submit that this fact can only be explained on the basis of the correction of a faulty metabolism in the mother by that of her foetus." (3) "Status epilepticus" (condition in which fits begin and recur with increasing frequency and severity, generally continuing until death occurs) "is, in my opinion, only explicable on the grounds of an acute autotoxic process. It closely resembles experimental convulsions from the exhibition of convulsant poisons, and it is very closely akin to the convulsions of uraemia and of eclampsia." (4) ". . . . the habitual epileptic person shows immunity from so many of the common diseases which are plagues of the world—such as the specific fevers of childhood, tuberculosis, pneumonia, and carcinoma." The same is true "with subjects of infantilism, or of idiocy or of cerebral diplegia, in all of which diseases we have grounds for believing that a perversion of bodily metabolism is the essential cause." The author further argues that "the epileptic occurrences are not responsible for the mental deterioration" which is sometimes found in epileptics, but the mental disorders "must be the result of some concomitant metabolic fault akin to that

which is supposed to give rise to the progressive mental deterioration in dementia praecox." The author also discusses organic epilepsy which is supposed to be caused by a neural lesion. Statistics of the Great War showed that only 4% of brain injuries were followed by epilepsy. In disseminate sclerosis, which is commonly accompanied by brain lesions, only 1 in 500 cases has epilepsy. In cases of cerebral tumor the incidence of epilepsy is less than 10%. "There is no lesion of the brain which will certainly produce epilepsy, whatever be its nature or position. There is hardly a lesion of the brain of any nature which has not produced epilepsy." The author argues, therefore, that the cause of organic epilepsy, whether of the generalized or Jacksonian type, is the same as for idiopathic epilepsy—a metabolic disturbance which exists in the individual to a minor degree, "so that there is no spontaneous outburst until the local lesion of the brain is added."—*W. T. Heron* (Minnesota).

3534. **Collier, J. Epilepsy.** *Lancet,* 1928, **214**, 642–647.—In this lecture (second of Lumleian series) the author considers the diseases known as migraine, narcolepsy, pyknolepsy, vaso-vagal attacks, syncopal attacks, and tetany. He describes all of them. His thesis is that they are all related to epilepsy and are all caused by metabolic disturbance. Migraine, narcolepsy, and tetany are known to occur sometimes, like epilepsy, from lesions of the brain. Migraine also occurs with renal disease. Lowering of blood pressure is believed to accompany all the above diseases as well as epilepsy. This is hard to demonstrate in some cases because of the rapidity with which the attack occurs and passes.—*W. T. Heron* (Minnesota).

3535. **Collier, J. Epilepsy.** *Lancet,* 1928, **214**, 687–692.—The author maintains that the mental deterioration which is sometimes associated with epilepsy is not caused by the fits. The two phenomena have separate causes which happen to occur in the same person. The positive phenomena is epilepsy, e.g., convulsive movements, sensations of vision, etc., are phenomena which belong to the lower neural centers and occur when the inhibiting effect of the cerebral cortex is removed. This stoppage of the functioning of the cerebral cortex occasions the negative phenomena seen in epilepsy, e.g., loss of consciousness, loss of speech, etc. The treatment of epilepsy is outlined. A bibliography is appended to this concluding lecture of the Lumleian series.—*W. T. Heron* (Minnesota).

3536. **Courbon, P., & Fial, G. Pseudo-délire de jalousie passive chez une hypomaniaque.** (Pseudo-delirium of passive jealousy in a hypomaniac.) *Bull. Soc. clin. méd. ment.*, 1928, **21**, 45–48.—The report deals with a woman, 40 years of age, afflicted with cyclothymia, whose hypomaniacal attacks are characterized by the appearance of ideas of passive jealousy. She complains, then, that her household is bent on persecuting her. She expresses her complaints in a playful manner, causing the author to think that her attacks are only pseudo-deliria of passive jealousy brought on merely through an entirely verbal interpretation which the patient makes regarding the defensive reactions made by her household as a result of her abnormal behavior.—*Math. H. Piéron* (Sorbonne).

3537. **Courbon, P., & Vié, —. Délire épisodique de persécution per ectopisme mental chez une paysanne cuisinière à Paris.** (Episodic delirium of persecution with mental disorientation in a peasant woman cook in Paris.) *Bull. Soc. clin. méd. ment.*, 1928, **21**, 23–26.—Delirious attacks with a fear predominance accompanied the menopause of a peasant woman who had settled in Paris but who had still the tastes and customs of her own village. In this case there was a contrast between the state of mind of the individual, who was not at all morbid, and the collective state of mind of the environment in which she found herself. This contrast often made her adaptation to the environment difficult, a fact which produced a more or less serious lack of mental equilibrium.—*Math. H. Piéron* (Sorbonne).

3538. **Culpin, M. A study of the incidence of the minor psychoses: their clinical and industrial importance.** *Lancet,* 1928, **214**, 220–224.—Minor psy-

choses cause large losses in industry, but the losses vary greatly for different occupations. In an examination of 100 learners in a school of telegraphy 54 were found free from symptoms of psychoses, 27 showed slight symptoms, and 19 showed severe symptoms. The author used the McDougall-Schuster dotting machine as a diagnostic instrument. He believes that this keeps a check upon the results of psychological examinations, since it was found that the mean of the dotting test for individuals with no symptoms was 164 ± 2.0, for individuals with obsessional symptoms 201 ± 5.5, and for individuals with symptoms of hysteria or anxiety 142 ± 3.1. There is no reason to believe that there is any active selection of particular occupations by psychoneurotic people, except in the case of art students, where the results of the experiment confirm popular belief about the artistic temperament. "The results suggest that the commonly supposed causes of psychoneurotic illness are merely factors in exacerbating a previously existing condition. Yet the fact that much illness is absent in some groups indicates the importance of studying exacerbating factors that must be present in those groups with a high sick-rate." Some of these factors are discussed in the article.—*W. T. Heron* (Minnesota).

3539. **Dearborn, G. V. N. Hospital happiness and contentment.** *Hospitality*, 1928, **6**, 6–7.—*W. S. Hunter* (Clark).

3540. **Dearborn, G. V. N. Psychiatry and science.** *J. Ment. Sci.*, 1928, **74**, 203–223.—It is inevitable that psychiatry to progress must ever change, develop, acquire new methods and new points of view. Too long there has existed a gulf between psychiatry and psychology. Research psychologists have never seriously taken up the study of the psychology and physiology of properly psychiatric problems, e.g., catatonia, hallucinations. The study of intelligence has been stressed out of all proportion to its practical importance in life. Too little is known of regression and deterioration of intelligence in psychotic persons. On the other hand, medical men and psychiatrists have an inadequate knowledge of psychology and philosophy. The dualistic viewpoint of mind and body still pervades much thinking, although "a mind without concomitant organism to bring it within the range of causality and space and time is utterly inconceivable in any scientific sense." Other fields of science are becoming of value to psychiatry—paleoneurology, biochemistry, occupational therapy, and personal hygiene. It is for the psychiatrist to use every available aid and contribution to his science.—*E. F. Symmes* (Institute for Child Guidance).

3541. **Dowling, E., & Orlando, R. Sindromes de los lóbulos pre-frontales.** (Syndromes of the pre-frontal lobes.) *Rev. oto-neuro-oftal. y de cirugía neur.*, 1928, **3**, 109–132.—A study of three cases involving syndromes of the pre-frontal lobes (two of the right and one of the left), which in conjunction with other clinical data have convinced the author (1) of the significance of inferior facial paresis of the side opposite to the lobe involved; (2) the need for meticulous care in questioning patient and relatives as well as the importance of extensive observation and study of symptoms to eliminate error in diagnosis. Authors conclude that the functions of the left pre-frontal lobe are superior to those of the right; that the removal of the entire right zone need not result in grave derangement of the superior psychic functions; that a pathologic condition involving the left pre-frontal resulted in lack of initiative, inability of patient to orient himself in time and space, loss of voluntary memory and sense of personal identity.—*C. Burson* (Tulane).

3542. **Dupouy, R., & Picard, J. Erotomanie papale chez une schizophréne en évolution. Valeur de l'intuition délirante dans l'érotomanie.** (Erotomania directed toward the Pope in a schizophrenic in evolution. The worth of delirium intuition in erotomania.) *Bull. Soc. méd. ment.*, 1928, **21**, 9–15.—A young woman, 23 years of age, employed in an office, fairly well educated, well behaved, but with mystical tendencies, showed erotomaniacal behavior, the dis-

tinguishing feature being an imagined passion for a person whom she had never seen (the Pope). It was through intuition that she knew the Pope loved her, this intuition having the rôle of sensory impression. There had been an affective shock, a sort of intuitive thunder-bolt. The author lays particular stress on the rôle of intuition and revelation in the psychological mechanism of erotomania.—*Math. H. Piéron* (Sorbonne).

3543. **Ettinger, G. H. The clinical method of teaching normal psychology.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 12–15.—Because medical students believe that psychology is another of those superfluous arts classes, Queens University used the clinical method of teaching normal psychology by showing the abnormal to medical students, with considerable success.—*C. H. Johnson* (Boston Psychopathic Hospital).

3544. **Gardiner-Hill, H. The treatment of myxoedema.** *Lancet*, 1927, 213, 621–622.—Patient must be fed either some form of thyroid extract or synthetic thyroxin. As a rule the diagnosis of this disease cannot be made until the causal factors producing it have ceased to be operative. There is little, therefore, which can be done from the preventive side, but the disease yields readily to thyroid treatment.—*W. T. Heron* (Minnesota).

3545. **Gillespie, R. D. The clinical differentiation of psychogenic and physiogenic disorders.** *Brain*, 1928, **51** (Part 2), 254–275.—The clinical differentiation of psychogenic and physiogenic disorders often presents difficulties. Thirteen cases are presented in this paper, in nine of which there were erroneous diagnoses, five of organic disease when only psychogenic symptoms were present, and four of psychogenic disorder when the condition was one of organic disease. The first criterion is the nature of the physical signs if there are any. The second is the type of history of the illness itself. A general setting of psychic disequilibrium is necessary for the development of a psychogenic disorder in response to external factors, with a possible exception in those circumstances where the occurrence of a trauma itself produces a craving for something not hitherto aspired to, and therefore furnishes an opportunity for dissatisfaction. Closely related is the personality make-up of the patient. In practice the mental attitude of the patient to his signs and symptoms is the criterion on which perhaps most stress should be laid in the clinical summing up of doubtful cases. Finally the criterion of the purpose which the psychogenic illness fulfils should be applied.—*E. N. Brush* (Boston Psychopathic Hospital).

3546. **Hartung, —. Ein Vorschlag zur Entlastung der Landesheilanstalten.** (A proposal for the relief of provincial hospitals.) *Psychiat.-neur. Woch.*, 1927, No. 49, 541.—For the psychoses of old age which are in need of hospital care in ever increasing numbers, the author recommends special homes for the aged.—*W. Wirth* (Leipzig).

3547. **Henssge, E. Die Wirkung der Musik auf Kranke mit psychischen und nervösen Störungen.** (The effect of music upon invalids with psychic and nervous disturbances.) *Psychol. u. Med.*, 1927, **2**, 214–222.—Music has a twofold effect: (1) it creates a pleasant affective tone, (2) it stimulates to rhythmic dance movements, and produces a favorable reaction in muscles, respiration, heart, and vasomotor system. The author reviews the literature on the mental and physical effects of music. He outlines a technique for the therapeutic use of music, and cites cases from his own practice. He proposes a parallel between music and psychoanalysis. Whereas the latter brings to consciousness suppressed experiences and ideas, music brings to consciousness suppressed feelings and moods. "Music is the language which the subconscious understands best."—*M. F. Martin* (West Springfield, Mass.).

3548. **Herrmann, H. Über die Behandlung funktioneller Sprachstörungen unter doppelseitiger künstlicher Vertaubung durch Lärm.** (Treatment of functional disorders of speech with bilateral adventitious deafness caused by noise.)

Passow u. Schäfer'sche Beitr., 1927, **27**, H. 1.—The treatment is based on the fact that suddenly deafened persons lose first of all the habitual auditory control over the intensity of the voice.—*W. Wirth* (Leipzig).

3549. **Hiller, F. The electivity of diseases of the nervous system.** *Arch. Neur. & Psychiat.*, 1928, **20**, 145–154.—The author seeks to answer the question: How is the special localization of diseases of the nervous system under the influence of various exogenous agents to be explained? What constellation of conditions, e.g., leads: to the localization of epidemic encephalitis in certain parts of the midbrain, to the elective characteristic diseases of certain peripheral nerve territories in diphtheria, lead poisoning, alcohol abuse and other noxae? After mentioning such factors as the modus of the infection, gross anatomic relations and more complicated metabolic processes as determining in part the elective localization of some infections, he stresses the possible connection between locally accentuated disorders and the topography of the vascular supply of the various parts.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3550. **Hinsche, G. Schule und psychopathische Reaktion.** (School and psychopathic reaction.) *Psychol. u. Med.*, 1927, **2**, 131–137.—In the realm of transition between normal and psychopathic constitutions, the psychiatrist and the jurist see only fragments; the school physician lacks the time for continuous observation; and the teacher has not the knowledge to evaluate what he sees. Judgments of teachers and parents concerning psychopathic youths show astonishing contradictions. Psychopathic constitution manifests itself in school life in a variety of ways, sometimes by conflicts with authority and sometimes by leadership in school affairs. School discipline is generally helpless with psychopaths, because each reacts differently. Psychopathy is a medical, pedagogical and social problem, and necessitates cooperation between teacher and physician.—*M. F. Martin* (West Springfield, Mass.).

3551. **Juliusburger, O. Von gesunden und kranken Nerven. Tiefenpsychologische Bemerkungen zur Psychotherapie.** (Concerning well and sick nerves. Depth-psychology observations upon psychotherapy.) *Psychol. u. Med.*, 1928, 3, 1–18.—Well or sick, man is an inseparable psychophysical unity. No disease affects the body without affecting the mind, and vice versa. A doctor should guard against limiting his treatment to the body. Complete physical examination and treatment should of course come first, but when the doctor finds that the symptoms are not due to any physical cause, he should examine the mental life of the patient, from the present time back to infancy. He must explain to the patient that the symptoms are real, but not due to any bodily cause. The author outlines a way of explaining mental mechanisms to a nervous patient. The physician cannot take all troubles out of the world, but he can help his patients gain strength to face their troubles squarely. We should not overlook heredity, of course, but today there is more need to remember that heredity is not all-powerful. Organic inferiority may have a physical basis. What chiefly distinguishes geniuses from criminals is the way they deal with their inferiorities. In discussing mental mechanisms, the author evaluates the contributions of Wernicke, Adler, and Freud. Admitting the importance of the erotic drive, which Freud has emphasized, he holds that other instincts may play an equally important rôle in nervous disturbances and that the fundamental urge is Schopenhauer's "will to live."—*M. F. Martin* (West Springfield, Mass.).

3552. **Kennedy, A. M., & Rogers, L. Tumours of the spinal cord.** *Lancet*, 1928, **214**, 225–227.—The clinical pictures of six cases are given. The usual and most general symptoms are girdle pains and weakness in legs. There is also disturbances of the reflexes. All but one of the cases recovered from the operation and left hospital improved.—*W. T. Heron* (Minnesota).

3553. **Koester, —. Über die Häufigkeit des Vorkommens des Spasmus mobilis (wechselnde katatone Pupillenstarre) bei Schizophrenen.** (Frequency of

occurrence of Spasmus mobilis (alternating, catatonic rigidity of the pupil) in schizophrenics. *Arch. f. Psychiat. u. Nervenkr.*, 1927, **81**, 601–605.—*W. Wirth* (Leipzig).

3554. **Macnamara, E. D. A note on cutaneous and visual hallucinations in the chronic hallucinatory psychosis.** *Lancet*, 1928, **214**, 807–807.—A description of five cases of hallucinations of tiny black things moving and coming out of the skin. Other than hallucinations there is no mental disorder, although the phenomena are compulsive and lasting.—*W. T. Heron* (Minnesota).

3555. **Martin, J. P. The symptoms which result from injury of the corpus luysii.** *Lancet*, 1928, **215**, 315–318.—Injuries to the body of Luys result in violent chorea of the opposite side of the body. There is unusual involvement of the shoulder and hip, which produces movements of unusual magnitude. The affection of the face is less than one might expect considering the condition of shoulder and hip. Speech, swallowing, and respiration are all involved in the chorea. The movements stop during sleep. The tendon jerks of the affected side are less than those of the other, indicating a moderate degree of hypotonia. There is no loss of superficial sensation or of sense of position. In typical cases death occurs in a few weeks. There is a detailed description of one case together with photograph and drawings of sections of the brain. There are short descriptions of several other cases. A bibliography is given.—*W. T. Heron* (Minnesota).

3556. **Martin, J. P. Treatment of migraine.** *Lancet*, 1928, **215**, 82–83.—The exact cause of this disturbance is not known. It is often hereditary and in 80–90% of the cases it has begun before the age of 25. It is the common consensus of opinion that it arises in some way from a functional disorder of the vegetative nervous system. Some writers, however, regard it as a psychoneurosis. The nature and kind of medical treatment are considered in the article.—*W. T. Heron* (Minnesota).

3557. **McCowan, P. K., & Cook, L. C. The mental aspect of chronic epidemic encephalitis.** *Lancet*, 1928, **214**, 1316–1320.—These authors classify the mental disorders associated with chronic epidemic encephalitis into the following types: (1) bradyphrenic; (2) depressed: (a) reactive, (b) agitated, (c) hypochondriacal, (d) psychasthenic; (3) paranoid: (a) systematized delusions, (b) unsystematized delusions; (4) Apache: (a) delinquent, (b) restless. This article is too detailed and too many case histories are cited to summarize it adequately. The authors, however, point out the differences in symptoms which cause them to make the above classification. Several references are given at end of the article.—*W. T. Heron* (Minnesota).

3558. **McIlroy, A. L. The influence of parturition upon insanity and crime.** *Lancet*, 1928, **214**, 379–381.—A discussion of the insanities associated with childbirth, with emphasis upon the legal aspects of the situation.—*W. T. Heron* (Minnesota).

3559. **Meyers, I. L. Cerebellar phenomena in lesions of the temporal lobe.** *Arch. Neur. & Psychiat.*, 1928, **19**, 1014–1025.—A brief review of the experiments done on this problem with a report of three cases. The cerebellar phenomena in lesions of the temporal lobe are: falling to one side, past-pointing in a definite direction, diminution or loss of tendon reflexes in the limbs, chiefly contralateral, and tremors in these limbs. Theories are advanced to explain some of these symptoms. The severe mental disturbances accompanying these lesions may be assumed to be an expression of the profound disorientation in space, and the loss of appreciation of one's relation to the environment. If this loss is combined with loss of vision the patient is more or less completely deprived of the two major elements that enter into adjustment of the self to the outer world.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3560. **Minkowski, M. Sur un cas d'aphasie chez un polyglotte.** (A case of aphasia in a polyglot.) *Rev. neur.*, 1928, **35**, 361–366.—Report of three

cases of Broca's aphasia in which the return of speech did not follow the generally accepted rule that the language which is reestablished first and best is the one which the patient spoke the most readily at the time of the beginning of his aphasia. In two of the cases the author believes that the explanation of this anomaly lies in the importance of the place of the visual element in language, a fact which could explain the return first of the languages learned from books and not by ear. In the third case violent emotional feeling for a country is given as the reason for the early reestablishment of a language which is not the customary language of the patient. In any case this shows that general factors, pertaining especially to the instinctive sphere, can intervene and determine—at least for a certain period—the form and order of a particular restoration.—*Math. H. Piéron* (Sorbonne).

3561. **Moloney, J. C. The etiology of migraine.** *Arch. Neur. & Psychiat.*, 1928, **19**, 684–688.—A clinical study of cases indicates that a submerged intrinsic physiopathic mechanism is responsible for allergy and for migraine; that this mechanism, which is hereditary, is similar for both conditions. Recent work by other investigators and the author's own studies on epilepsy would tend to preclude the possibility that epilepsy is due to the same mechanism that causes migraine and allergy.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3562. **Nicole, J. E. Type psychology: its importance in mental hospital practice.** *J. Ment. Sci.*, 1928, **74**, 223–238.—Difficulties beyond mere description of types arise before type psychology can be applied to psychiatric practice or further to communal life. Before this is possible several steps are necessary: "(1) Better and more skilled determination of an individual's type. Here it must be remembered that many of the symptoms of insanity may be the expression of just the attitude and function that are opposed to the normal personality. (2) Ascertaining the relationships that are likely to occur between one type and another when they are brought in contact. And this may be different in the sane and insane. (3) Noting the results of such association and relationships on character, not forgetting the possibility of a change of type occurring. (4) Investigating the conditioning of the occurrence of relationships, finding those factors that assist and those that hinder. (5) Assessing the value of the results of such relationships. The evaluation need not be moral so much as psychological. It is often better to have a well-balanced personality that may not reach ethereal heights of morality than to have such a strictly moral outlook as might predispose to a psychosis from insoluble conflicts. (6) Regulating the occurrence or non-occurrence of these possible relationships. For instance, by bringing certain patients together and separating others, by placing certain patients under a particular charge-nurse, by carefully picking staff for acting as 'special' on a case."—*E. F. Symmes* (Institute for Child Guidance).

3563. **Nolan, M. J. Hallucinations and sanity.** *J. Ment. Sci.*, 1928, **74**, 49–58.—"Hallucinations are essentially of mental origin and any special division of them based on physical or purely psychical causes must be regarded as speculative, the causes in the main being physico-psychogenic." Hypnagogic hallucinations, which occur in normal persons, generally at a time immediately preceding or following sleep, belong to a borderline territory, but the term hypnagogic does not cover other hallucinatory experiences of persons who otherwise exhibit no abnormal psycho-sensorial disturbances. Steen previously felt that hallucinations do occur in the sane which do not differ essentially from those in the insane; that they can be produced by toxins in both and may occur independently of physical changes; possibly all hallucinations depend on some process of dissociation. To these points another is added—"hallucinations when recognized as such, whether or not their causation is understood by those who experience them, may be regarded as sane when they are not acted on in any degree; and as insane when they are translated into action which is detrimental to those persons or others."—*E. F. Symmes* (Institute for Child Guidance).

3564. **Pende, N. Constitutional inadequacies. An introduction to the study of abnormal constitutions.** Philadelphia: Lea & Febiger, 1928. $3.50.—*W. S. Hunter* (Clark).

3565. **Pierce, B. The subconscious factor in medicine.** *Lancet*, 1927, 213, 1221–1225.—This is a critical evaluation of the use of Freudian concepts in medicine. The Freudians "speak with confidence but lack the critical faculty. They postulate an unconscious which must ever be outside our comprehension, and give it a wonderful vitality. Changes are said to take place within it which can never be demonstrated. That is hardly the way of science, and much of the present fabric is top-heavy. The whip of enthusiasm may keep the top spinning for a while, but the Freudian theory is inherently unstable." The author believes, however, that the emphasis which this school of psychology places upon the subconscious is a contribution of value to medicine. They have "convinced us that experiences which have apparently left no trace may still be potent and can influence our conduct unwittingly."—*W. T. Heron* (Minnesota).

3566. **Pollock, H. M. Annual statistical review of patients in the state hospitals and private licensed institutions for mental disease.** *Annual Report of the Department of Mental Hygiene, State of New York, Albany, for the year ended June 30, 1927*, 141–263.—*L. Ackerson* (Institute for Juvenile Research).

3567. **Prince, M. Über die Notwendigkeit das systematische Studium der funktionellen Krankheiten in die medizinische Studienordnung aufzunehmen.** (On the need for including in the medical curriculum the systematic study of functional diseases.) *Int. Zsch. f. Indiv.-psychol.*, 1928, **6**, 2–5.—Deplores the lack of instruction in modern medical curricula on the nature and treatment of the functional diseases and disturbances, which so closely resemble organic diseases, and whose unsuccessful treatment by medical men has driven patients to quacks, osteopaths, and others of like ilk as a last resort. Appeals to medical faculties to wake up and follow the example of the Tufts Medical School in including this field of study.—*K. M. Cowdery* (Stanford).

3568. **Roger, H. Du syndrome thalamique au syndrome pariétal. Diagnostic différéntiel des syndromes sensitifs cérébraux.** (Thalamic and parietal syndromes. Differential diagnosis in sensory cerebral syndromes.) *Sud méd. et chirur.*, 1928, 926–931.—Besides the painful phenomena peculiar to thalamic syndromes, one also finds injury to deep sensitivities associated with a painful hyperreaction to pricking and hyperesthesia to cold. In the parietal syndrome the dominant note is given by injury to deep sensitivity with integrity of bony sensitivity. In both the parietal and thalamic syndromes the sensory disorders are associated with motor disorders. However, in the thalamic syndrome the following characteristics are often observed which are rarely found in the parietal syndrome: asynergy, ataxia, choreic movements, and intentional contraction. The author stresses chiefly the observations made by Head and Riddoch, Verger, Déjérine, Roussy and Pierre-Marie.—*Math. H. Piéron* (Sorbonne).

3569. **Tartar, G. Report of a case of stuttering as a problem of vocational readjustment.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 52–58.—Stuttering is generally treated not as a disease, but as a symptom of an emotional disturbance resulting from a failure on the part of the individual to adapt himself to a social situation. This case is that of an ex-soldier whose stuttering was eliminated by interesting him in a vocation which utilized his assets, which he had considered formerly his liabilities.—*C. H. Johnson* (Boston Psychopathic Hospital).

3570. **Taylor, W. S. Morton Princes Anschauungen über die moderne Psychopathologie.** (The views of Morton Prince on modern psychopathology.) *Int. Zsch. f. Indiv.-psychol.*, 1928, **6**, 5–22.—Summarizes Morton Prince's conclusions as expressed in his *Dissociation of a Personality* and *The Unconscious*. Comparisons are made with Freudian views under the following headings: conception of the organism in general, association and integration, conflicts, dissocia-

tion, the subconscious, the source of functional disturbances, and psychotherapy. Prince's views are characterized as broader, more flexible in application, and more closely related to the observable phenomena of psychology and of biology.—*K. M. Cowdery* (Stanford).

3571. **Tramer, M. Arbeitstherapie. Über ihre Grundlagen, insbesondere die suggestiven Momente.** (Occupational therapy. Its basis, with special reference to the suggestive factors.) *Schweiz. Arch. f. Neur. u. Psychiat.*, 1927, **21**, 178–213; 1928, **22**, 122–144.—The author understands the concepts of occupational therapy to include all those measures which are taken in order to get a man in and keep him in an occupation through the practice of which one is justified in expecting a therapeutic influence on his condition. The first chapter is devoted to a discussion of physical and mental work and their comparative instinctive urges (the work instinct, movement and activity instincts). The concept of work is described from the therapeutic standpoint in this manner: that activity which leads in a positive manner to a definitely set and earnestly desired goal. This goal is the production and consumption of a materially or ideally present quality, a real mental satisfaction of an endeavor or a general raising of the (physical or mental) ability of the worker. Suggestion, as credulous acceptance, is to be contrasted with and even distinguished from the other forms of inter-human relations such as imitation, recognition, compulsions, surprise, etc. These various forms have not yet been satisfactorily analyzed as to what accounts for the difference between the perception and the theory of suggestion. However, a basic form of suggestion may be picked out which may be described as follows: by suggestion we understand a mental relationship of a particular sort between two or more persons the essence of which consists in the fact that one person, the subject (*Suggerend*), takes over a given content (instinctive or emotional state, percept, idea, thought, judgment, valuation, acts, or tendencies to action) from another, the suggestor, with the feeling or thought that it is his own. This mental relationship is of a hierarchical structure and has its essential genetic activation in the confidence of the subject in the suggestor, from which follows the acceptance of the latter by the former. Out of this acceptance there comes the acceptance of thought content described above. The confidence, in its turn, originates in a complex manner, growing from a thymic (emotional or instinctive origin) and thymo-intellectual relationship between subject and suggestor. There follows a discussion of the conditions in the suggestor and subject, which must be considered in the establishing and operation of suggestion. The theories of Münsterberg, Bleuler, Janet, Strauss, etc., are critically discussed. In the second part (pp. 122 ff.) the general results of physical and mental work are listed and the suggestive factors of occupational therapy elucidated and defined. Through the separate consideration and observation of the different phases, which may be effective within and without the field of suggestion in occupational therapy, a more accurate insight into the dynamics of occupational therapy is made possible. Lastly there follows a single individual case illustrating the choice in the work medium and the means of introduction to the work and continuing in it, and a satisfactory comprehension and evaluation of the therapeutic effects to be expected from the use of occupations.—*M. R. Lambercier* (Geneva).

3572. **Travis, L. E. The influence of the group upon the stutterer's speed in free association.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 45–51.—Allport's main conclusion in regard to his normal speakers is that "the presence of a co-working group is distinctly favorable to the speed of the process of free association." The principal conclusion of this study with stutterers is just the opposite, namely, that they show superiority in number of associations when they are working alone. Allport found a greater variability in output of group work. This study found that stutterers had a greater variability of output when working in solitude.—*C. H. Johnson* (Boston Psychopathic Hospital).

3573. **Travis, L. E., & Fagan, L. B. Studies in stuttering. III. A study of certain reflexes during stuttering.** *Arch. Neur. & Psychiat.*, 1928, **19**, 1006–1013.—The knee and Achilles reflexes in the authors' cases showed a greater amplitude during the speech of normal speakers than during silent periods. In the stutterers there is, during stuttering, an increase in amplitude comparable to the speaking period of the normal speakers. When the stutterer is speaking freely, in contrast to the period of free speech of normal speakers, the amplitude of the two reflexes is less than during silent periods. The variations in resistance offered by the pendant hand to an unexpected blow are directly comparable to these reflex variations.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3574. **Tucker, B. R., & Shield, J. A. Amnesia: report of a case apparently benefited by operation.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 40–44.—Contemplation of this case and of other cases in which amnesia has been associated with head injury, convulsive or unconscious attacks, leads to a belief that the inauguration of an amnesic state may be dependent upon a more or less sudden change in cerebro-spinal fluid pressure and that the split or amnesic personality state may persist until some other sudden readjustment in circulation and fluid pressure occurs. Cerebral decompression, in this case, helped to stabilize the circulation and fluid pressure, although it is impossible at this time to know the permanency of the results.—*C. H. Johnson* (Boston Psychopathic Hospital).

3575. **von Muralt, A. Zur Frage der Begutachtung und Behandlung des moralischen Schwachsinns.** (On the question of expert advice and disposition of moral imbeciles.) *Schweiz. Zsch. f. Strafrecht.*, 1927, **40**, 315–332.—Criminal law is in part built up on the idea of atonement. In those cases where the development of a feeling of guilt is so to speak organically impossible expiatory punishment loses its justification. Until recent years psychiatrists who were consulted in regard to such cases closed their eyes to the question of non-responsibility. In the insane asylums, however, these moral idiots are a disturbing element. On strictly practical grounds, therefore, certain psychiatrists, such as Gehry and very recently E. Bleuler, have proposed that difficult morally defective criminals be declared responsible and belong in the penitentiary. This also is unsatisfactory. What the psychiatrists should demand is the establishment of special institutions for such defectives. The question of responsibility must always lead to a conflict between the legal and the medical interpretations. In spite of this, it is possible that an agreement between the legal world and contemporary psychology and psychiatry may be brought about. The more recent ideas of expiatory punishment and criminal law are by no means irreconcilable; the new tendency is not fundamentally deterministic; it is prepared to recognize a certain freedom of choice, a feeling of guilt. Where, however, as is the case with moral idiots, this expiatory need, for pathological reasons, is lacking, the patients will not be punished. Especially difficult will be the question of those very frequent border-line cases, e.g., criminals who suffer from serious neuroses, etc. At least in these border-line cases it would seem advisable that the psychiatrist should not settle the question of responsibility himself, but after he has given to the lawyer his strictly scientific advice, it is best to leave the responsibility to the latter, who can more easily make an arbitrary decision.—*M. R. Lambercier* (Geneva).

3576. **Walker, G. F. A note on camptocormia.** *Lancet*, 1928, **214**, 808–809.—A neurosis occasionally seen in civil life, but common during the last war, in which the patient's body is bent forward at the hips; the shoulders are braced backwards; and the head is lifted by extension of cervical spine. "The patient peers upwards and forwards, grinning with fatuity." Condition is accompanied by no organic lesion or disease. Treatment and bibliography are given.—*W. T. Heron* (Minnesota).

3577. **Yates, A. G. A case of cerebellar tumor.** *Lancet*, 1928, **214**, 78–79.—A description of the symptoms presented by a five-year-old child who was found upon post-mortem to have a tumor the size of a walnut imbedded in the right lobe of the cerebellum.—*W. T. Heron* (Minnesota).

[See also abstracts 3346, 3357, 3381, 3395, 3411, 3420, 3423, 3451, 3462, 3466, 3468, 3472, 3475, 3496, 3504, 3598, 3630, 3635, 3686.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

3578. **Aigner, E. De Stigmatisierte von Konnersreuth.** (The stigmatized girl of Konnersreuth.) *Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene*, 1928, **1**, 337–344.—The article tends to accept the genuineness of the stigmata, following Häberlin's judgment (Bad Nauheim). The fact that they are produced through vegetative tissue processes would show the close connection between mind and body, the body-soul unity. The fasting is a miracle. If it should be substantiated, this would also prove the charismatic character of the other facts.—*A. Römer* (Leipzig).

3579. **Althaus, P. Mission und Religionsgeschichte.** (The mission and history of religion.) *Zsch. f. system. Theol.*, 1927, **5**, 722–736.—The non-religious world, whose basic forms of religious life are mysticism and moralism, does not attain the certainty of the revelation of the holy love of God in Christ.—*A. Römer* (Leipzig).

3580. **[Anon.] The treatment of crime.** *Lancet*, 1928, **214**, 1129–1130.—A brief statement of the condition of prisons in England and the means which are taken to separate various types of offenders.—*W. T. Heron* (Minnesota).

3581. **Aubrey, E. E. Critical analysis and the worship attitude.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 204–222.—Critical analysis serves to make clear the relations between religious practices and the social consciousness. With the aid of self-conscious thinking the flexibility of individual religious attitudes will be maintained, so that religious devotion may grow with experience and vitalize individual conduct. The experience of participation is enriched by occasional detachment. It leads to a higher level of participation by instigating a search for the ultimate validity of the practical ends of life. The values around which the group attitudes are organized will be kept vital, and new values created, by the creative revaluation of values through critical intelligence.—*C. H. Johnson* (Boston Psychopathic Hospital).

3582. **Austin, J. Can courts prevent crime? The Domestic Relations Court as a possible preventive of crime.** *Welfare Mag.*, 1928, **19**, 767–771.—*L. Ackerson* (Institute for Juvenile Research).

3583. **Beth, K. Religionspsychologie und Seelsorge.** (Psychology of religion and the ministry.) *Zsch. f. Religionspsychol.*, 1928, **1**, 5–24.—Beth discusses psychology as science of the mind, and also guidance of souls (conscious and unconscious suggestion). Finally he considers the depressive and hybrid types.—*A. Römer* (Leipzig).

3584. **Boas, F. Primitive art.** Cambridge: Harvard, 1928. Pp. 378. $7.75. Paper, $6.75.—*W. S. Hunter* (Clark).

3585. **Bornhausen, K. Die Offenbarung. Ueber die Verbindung von Gott und Mensch in der Zeit.** (The revelation. The union of God and man in time.) Leipzig: Quelle u. Meyer, 1928. Pp. xvi + 284.—Based on psychology and the history of religion. The meaning of the revelation appears wherever man tries to transcend history. Only the category of modality is to be considered as a synthetically productive factor in religion.—*A. Römer* (Leipzig).

3586. **Branham, V. C. The chemical mass-action law as applied to social adaptation.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 72–78.—Social reactions are

prone to reach a state of equilibrium in which the process is reversible and limited to the workings of the mass-action law. The system tends constantly to change in that the components of the social process involved tend to form new combinations which in their turn follow mass-action principles.—*C. H. Johnson* (Boston Psychopathic Hospital).

3587. **Burgdorf, M. Das Bekehrungserlebnis Luthers.** (Luther's experience of conversion.) Neumünster: Christophorus, 1928. Pp. 40. M. 0.80.—The author links the subject with the present time through a comparison with Karl Barth's theology. In Luther's experience the terrors of conscience were followed by a true cognition of God.—*A. Römer* (Leipzig).

3588. **Cole, L. W. Human instincts and social life.** *Univ. Colo. Stud.*, 1928, **16**, 175–196.—Following upon a criticism of those behaviorists who deny the existence of hereditary forms of behavior and posit reflex and conditioned behavior theories to explain instinct, the author offers a translation of the second chapter of *Psychologie Sociale* by G. L. Duprat. Duprat considers hereditary impulses to be at the basis of all psycho-sociological evolution. "Psychology," he says, "must modify the traditional conception of instinct not only by recognizing its relative variability but by considering its evolution as subordinated to variable social conditions." The translation comprises 20 pages; the translator's introduction 2 pages.—*N. L. Munn* (Clark).

3589. **Cooley, E. J. Probation and delinquency; the study and treatment of the individual delinquent.** New York: Nelson, 1927. $3.00.—*W. S. Hunter* (Clark).

3590. **Cowley, W. H. Three distinctions in the study of leaders.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 144–157.—The approach to the study of leadership usually has been and perhaps always must be through the study of traits. Leadership obviously is not a simple trait but rather a complex of many traits fashioned together as a unity. An adequate appraisal of leadership would reduce this complex to its individual units, and any study of leadership to be of value should produce a list of traits which go together to make the leader. The first distinction in the study of leaders is the distinction between headman and leaders: men, who because of ability or prestige, have attained to a position of headship, and men going somewhere, who have a motive, who have a program. The second distinction is between the situational and the individual emphasis in studying traits and more especially the distinction between situational prestige traits and individual traits in isolation. The third distinction is between so-called natural leadership and leadership in specific situations, a distinction which might be summed up in the phrase "the specificity of leadership."—*C. H. Johnson* (Boston Psychopathic Hospital).

3591. **Dahlke, P. Buddhism and its place in the mental life of mankind.** London: Macmillan, 1927. Pp. viii + 254.—Dr. Dahlke's book deals with the metaphysics of Buddhism, and in it he endeavors to point out how this "religion of thoughtfulness" meets a need in Western thought. According to science, matter and force account for everything in the universe. If we trace cause and effect back far enough we come to a necessary beginning, that is, God, as an original creator. This also gives to religion its necessary background. "Science is the quartermaster of faith." But science does not satisfactorily explain consciousness. Buddhism needs no God because it regards the world as without beginning. Similarly, it needs none on the score of consciousness or soul, because that also is without beginning. Each birth is a re-birth of a consciousness that has left its earlier embodiment at death, and so on indefinitely. Hence the fear of God is not the motive back of Buddhism, but rather it is the fear of suffering, for to the Buddhist life means suffering. Life is conditioned by ignorance. Therefore the only tolerable form of existence is one of enlightenment or Nibbana, in which life has become so attenuated by the abstraction of lust, hate, and

delusion that rebirth fails to take place. In this way comes deliverance from suffering and death. Thus the craving, grasping life functions which were without beginning may be brought to a propitious end through mental discipline. Buddhism especially points out the way by which this condition of enlightenment may be attained. This is the Eightfold Path, namely: right insight, right resolve, right speech, right doing, right livelihood, right effort, right recollection, right mental concentration. Obviously the following of this path requires a good deal of deliberate reflection. There is a kind of thinking that has nothing to do with logic and argumentation, in which "immediate insight opens out." Hence Buddhism does not use logic in the ordinary sense of the word. Science must make artificial limitations and distinctions as a part of its method of procedure. It employs the concept, which is also artificial. The Buddhist's acquired thought process is a development which proceeds in so natural and organic a way that it is best described as a nutritive process in which consciousness is the product and sensations, perceptions, and concepts are the differently elaborated foods which are automatically absorbed for its support. The peculiar feature of this consciousness is that the feeling of distinction between object and subject is obliterated, and a condition of unity established in which "one ever and again becomes the other." This result is obtained through instruction. This consciousness is a touchstone for evaluating one's fears, desires, and emotions generally, and constitutes reality or actuality *par excellence*, serving eventually to guide the Buddhist to Nibbana.—*J. P. Hylan* (Stoneham, Mass.).

3592. **Davenport, C. B. Crime, heredity and environment.** *J. Hered.*, 1928, 19, 307–313.—The author offers the thesis that manifestations of crime are due both to hereditary peculiarities and environmental conditions. Training that is effective for most individuals is not adapted to the typical individual with criminalistic tendencies. Illustrations are presented of two antisocial types—the wayward girl and the burglar—and treatment is prescribed for each. To combat the present crime wave the value of prompt and painful punishment is emphasized.—*B. S. Burks* (Stanford).

3593. **Davida, J. Beiträge zur Kraniologie der Magyaren und siebenburgischen Walachen.** (Contributions to the craniology of the Magyars and Transylvanic Wallachians.) *Anat. Anz.*, 1928, **66**, 30–42.—*J. F. Brown* (Yale).

3594. **de Madariaga, S. Englishmen, Frenchmen, Spaniards: an essay in comparative psychology.** London: Oxford Univ. Press, 1928. Pp. xix + 256. 12/6.—Englishmen are ruled by fair play, Frenchmen by *le droit*, Spaniards by *el honor*. Consequently the Englishman is the typical man of action, the Frenchman the man of thought and the Spaniard the man of passion. The first part of the book studies, with copious illustration, all the combinations of these three characteristics: action in the man of action, action in the man of thought, action in the man of passion; thought in the man of action, thought in the man of thought, thought in the man of passion; passion in the man of action, passion in the man of thought, passion in the man of passion. The author then passes to more concrete historical and psychological study and shows how his three leading characteristics find expression in each nation-group in the structure of the community, leadership, political structure, historical development, the language, art and letters, and love, patriotism and religion. The whole book is a strong and vigorous argument for the reality and importance of national character.—*F. C. Bartlett* (Cambridge, England).

3595. **Ellis, W. E. Bovarysm; the art-philosophy of Jules de Gaultier.** Seattle: Univ. Washington Bookstore, 1928. Pp. 40. $0.65.—Jules Gaultier is an artist-philosopher, almost unknown in America because his doctrines are aristocratic and anti-Christian. He adds to Schopenhauer's concept of the will-to-live and to Nietzsche's will-to-power the concept of the will-to-illusion. Good and evil should be considered under the sole aspect of beauty. Bovarysm, named

from Flaubert's *Madame Bovary*, is one of the fundamental doctrines of his philosophy. Bovarysm springs from the instinctive urge to conceive oneself otherwise than one is (*se concevoir autre qu'il n'est*). As a result, the absolute ego can never be known. Gaultier considers bovarysm as the underlying law of human evolution. The author translates literally a short autobiography of Gaultier, and lists his main works.—*A. B. Hunter* (Worcester.)

3596. **Estabrooks, G. H. The enigma of racial intelligence.** *J. Genet. Psychol.*, 1928, **35**, 137–139.—Investigation of racial differences in intelligence seems at present hopeless, due to our inability (1) to eliminate environmental differences, (2) to determine races, (3) to determine intelligence.—*J. F. Dashiell* (North Carolina).

3597. **Getz, E. Music and the creative expression.** *Welfare Mag.*, 1928, **19**, 935–940.—*L. Ackerson* (Institute for Juvenile Research).

3598. **Glueck, S. The perennial puzzle—crime.** *Survey*, 1928, **60**, 333–334.—A report of a conference on mental factors in crime held in Boston on May 17 under the joint auspices of the Massachusetts Commission on Probation and the Massachusetts Society for Mental Hygiene.—*D. Grauer* (Chicago, Ill.).

3599. **Gregory, J. W. Human migration and the future.** Philadelphia: Lippincott, n.d. Pp. 218. $5.00.—*W. S. Hunter* (Clark).

3600. **Guardini, R. Vom Sinn der Schwermut.** (The meaning of melancholy.) *Schildgenossen*, 1928, **8**, 103–125.—Melancholy is an indication that the absolute exists.—*A. Römer* (Leipzig).

3601. **Heinzelmann, G. Die Erfahrungsgrundlage der Theologie.** (The experimental foundation of theology.) *Zsch. f. system. Theol.*, 1927, **5**, 737–757.—Religious understanding is made possible only through events that have religious significance. A close contact with religious reality is essential.—*A. Römer* (Leipzig).

3602. **Jelke, —. Das Immanente und das Transcendente der christlichen Offenbarungstatsachen.** (The inherent and the transcendental in the facts of Christian revelation.) *Neue kirchl. Zsch.*, 1928, **39**, 133–154.—*A. Römer* (Leipzig).

3603. **Jocher, K. Methods of research in studying the family.** *Family*, 1928, **9**, 80–85.—The family is considered a legitimate field of research by the various social sciences, none of which, unaided by the others, could make a complete study of family life. The statistical and case-work methods, which have been used in research in these sciences, have been applied generally to problems of family disorganization. There is a need for research to discover the principles of successful family relationships.—*D. Grauer* (Chicago, Ill.).

3604. **Kent, F. R. Political behavior.** New York: Morrow, 1928. $2.50.—*W. S. Hunter* (Clark).

3605. **Kesseler, K. Das Problem der Offenbarung.** (The problem of revelation.) *Christliche Freiheit*, 1928, **44**, 149–152.—Kesseler considers Bornhausen's attitude towards this problem a relief after the discussion through so-called dialectic theology.—*A. Römer* (Leipzig).

3606. **Klee, R. Haben die religiösen Erlebnisse Erkenntniswert?** (Do religious experiences have epistemological significance?) *Phil. u. Leben*, 1928, **4**, 168–171.—Religious sentiments can be called neither pathological nor natural. Since they lead beyond the natural, they are building a bridge to the eternal.—*A. Römer* (Leipzig).

3607. **Koepp, W. Panagape. Eine Metaphysik des Christentums.** (Panagape. Metaphysics of Christianity.) Gütersloh: Bertelsmann, 1928, 2nd part. Pp. xii + 335. M. 15.—*A. Römer* (Leipzig).

3608. **Kroeber, A. L. Native culture of the Southwest.** *Univ. Calif. Pub. Amer. Archaeol. Ethnol.*, 1928, **23**, 375–398.—The author summarizes the present status of knowledge on the topic. Among the major needs indicated are ecologi-

cal studies, more intensive study of northern Mexico, and search for timbers to complete a tree growth chronology. Attention is given to the dynamic relationships between the Northwest, Southwest and Southeast culture centers, and a study of the Caucasian contact from the native standpoint is urged.—*R. R. Willoughby* (Clark).

3609. **Landtman, G. The Kiwai Papuans of British New Guinea; a nature-born instance of Rousseau's ideal community.** New York: Macmillan, 1927. Pp. 524. $12.00.—*W. S. Hunter* (Clark).

3610. **Latcham, R. A. El totemismo y la historia de las religiones.** (Totemism and the history of religions.) *Criterion*, 1928, **13**, 138–148.—Author quotes from father's first hand observation of totemism among Incas and Araucanians of South America. He believes modern investigators misinterpret aborigines' customs and beliefs, overlooking differences in the viewpoint of primitive and civilized man. Discusses the geographic distribution of totemism; its variations among different peoples; place of symbolism in totem worship among the Incas; nature of this worship; marriage among members of a totemic group; totemism and veneration of ancestors, and the nature of the bond between the totem and his tribe. He holds that the idea that the tribe descends from the totem is not primitive but represents a later development, since the primitive must have had exact knowledge as to his individual origin. He rejects Freud's theory of the totem and the taboo. Bibliography: Latcham, R. *The Totemism of Ancient Andean Peoples* (London, 1927); *Organización Social y Creencias Religiosas de los Antiquos Araucanos.* (Santiago de Chile, 1924); *Los Incas, sus Origines y sus Ayllus.* (Santiago, 1928). Im Thurn, Graf. *Among the Indians of Guayana* (London, 1883). Goldenweiser, A. *Early Civilization* (New York, 1922). Freud, S. *Totem and Tabu* (1924).—*C. Burson* (Newcomb-Tulane).

3611. **Lehman, H. C., & Witty, P. A. Some compensatory mechanisms of the negro.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 28–37.—The writers found that negro children tend to engage considerably more frequently than white children in church activities, playing school, writing poetry, social activities and boxing. It is probable that certain of the above play activities are compensatory in nature and that the racial differences in the extent to which they are participated in reflect differences in the need and possibility for obtaining substitute gratification. The feeling of inferiority on the part of the negro may not be due to an actual inferiority in ability, but rather to the treatment accorded him by white people. The writers have noted that one activity, boxing, which seems to be compensatory in nature, is a conspicuously popular one among negroes. Boxing is an activity symbolizing mastery which offers few insuperable barriers to the negro. In the study of the predominance of negroes over whites in boxing, the data were assembled from school children in Kansas and Missouri.—*C. H. Johnson* (Boston Psychopathic Hospital).

3612. **Lima, M. Racial differences in intelligence in Minnesota.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 68–71.—Even when due consideration is given to the unreliability of the figures given, it is still obvious that the Latin nationalities run, on a whole, considerably lower than any other group.—*C. H. Johnson* (Boston Psychopathic Hospital).

3613. **McDougall, W. Grundlagen einer Sozialpsychologie.** (Fundamentals of social psychology.) (Trans. from the 21st English edition by G. Kautsky-Brunn.) Jena: G. Fischer, 1928. Pp. xvii + 322. M. 15.—*L. M. Harden* (Clark).

3614. **Meier, N. C. Special artistic talent.** *Psychol. Bull.*, 1928, **25**, 265–271.—A review of 35 titles on theoretical and experimental esthetics and on tests of talent.—*J. F. Dashiell* (North Carolina).

3615. **Metzgeroth, H. Die Religion des Bergarbeiters.** (The religion of the miner.) *Allg. Rundschau*, 1928, **25**, 25–26.—With a practical tone.—*A. Römer* (Leipzig).

3616. **Mirsky, D. S. The Russian character.** *Ethol. J.*, 1928, **13**, 33–38.—The reading public needs constantly to be reminded of and cautioned against the premature and otherwise unwarranted generalization of travelers. Mirsky says, "Few Europeans can speak of Russia with any degree of intelligence. Most seem to lose all faculty of judgment as soon as they approach the subject." He cites several instances of faulty judgments, viz.: the "Asiatic" appearance of the Kremlin towers, which were built by North Italian architects; and the "peculiar Russianness of Dostoyevsky" who is, he says, the most western of European writers. Two misconceptions largely account for erroneous thinking in regards to Russia. The first refers to the word "Slav." "Slavs," says Mirsky, "are neither a racial nor a cultural, but only a linguistic unity." The second misconception grows out of the impressions which western peoples get from reading Russian literature. "The part of Russian fiction known in England all belongs to a definite period and was all produced by practically the same social class." Mirsky warns that "in discussing the Russian character one ought to distinguish between the different social classes." "Pre-revolutionary Russia was the type of non-homogeneous society, with more or less water-tight class-barriers, which were not only economic and social, but cultural." However, there are six factors cited which have influenced all classes of Russians. These are (1) the orthodox church, (2) absence of chivalry and romantic woman-cult, (3) absence of a special class of lawyers, and of a specialized pursuit of law, up to 1860, (4) a great power of the state and of authority in general, (5) absence of an industrial and social unimportance of the commercial middle-class, (6) water-tightness between the social classes.—*F. M. Teagarden* (Pittsburgh).

3617. **Moore, S. H. Is capital punishment wrong?** *Welfare Mag.*, 1928, **19**, 965–969.—*L. Ackerson* (Institute for Juvenile Research).

3618. **Muntz, E. E. Race contact.** New York: Century, 1927. Pp. 421. $3.75.—*W. S. Hunter* (Clark).

3619. **Nadastiny, F. Die religiöse Einstellung des Gefangenen.** (The religious attitude of the prisoner.) *Zsch. f. Religionspsychol.*, 1928, **1**, 25–40.—*A. Römer* (Leipzig).

3620. **Paulhan, Fr. Qu'est ce que le sens des mots?** (What is the sense of words?) *J. de Psychol.*, 1928, **25**, 289–329.—In a detailed and anecdotal manner the many ramifications of the sense of words are discussed. "The sense of a word, in its largest acceptance, is the entire group of psychological facts which this word awakens in an intellect." These meanings are never fixed, but find themselves enlarged, limited, or transformed according to the exigencies of those who use the word. Some words disappear from general usage, or are limited to smaller and smaller groups because of restrictions in their sense. Other words are considerably modified to fit peculiar circumstances and because of this are conserved for considerable periods. Many words appear in a socially used context which deprives them of all meaning, while meaning which has been attached to words may be inexpressible because the words are at the moment missing. "That which constitutes the sense of a word, a group of ideas, of images, of tendencies, is sometimes present in the intellect without the word being there also."—*N. L. Munn* (Clark).

3621. **Pierce, D. H. Training the criminal.** *Welfare Mag.*, 1928, **19**, 907–908.—The same abilities and skills which a criminal employs in his activities could make him successful in legitimate work if his attitudes could be appropriately altered.—*L. Ackerson* (Institute for Juvenile Research).

3622. **Pratt, C. C. Quarter-tone music.** *J. Genet. Psychol.*, 1928, **35**, 286–293.—In occidental music the smallest interval used is the semi-tone. The fact that the ear can distinguish smaller intervals is partly responsible for the modern movement to use fourth-, eighth-, and sixteenth-tones, but it should be borne in mind that the least perceptible difference in tone may not coincide with the smallest interval. Experiments have demonstrated that two intervals must differ by at least a quarter-tone in order to be perceived as a difference in quality. To achieve musical significance and self-sufficiency may require separations of at least a quarter-tone.—*J. F. Dashiell* (North Carolina).

3623. **Prosch, F. The basis on which students choose their leaders.** *Amer. Phys. Educ. Rev.*, 1928, **33**, 265–267.—The various traits as they were expressed by the students themselves numbered 72. According to the classification in this study the social aspects such as pleasant disposition and personality create the greater impression on the group.—*R. Stone* (Clark).

3624. **Riddle, E. M. Stealing as a form of aggressive behavior. Part III.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 79–93.—In comparing the children who steal with those who do not steal, it can be concluded that although both groups are below the norm in the rate of their mental growth, the children who steal are more mature mentally and more intelligent than those who do not steal. It is apparent that there is a very close relationship between the aggressiveness of the form of stealing and the chronological age at which it most frequently occurs. The mental age at which a particular form of theft most often occurs is determined largely by the amount of planning required in its execution. Furthermore, it is probable that certain forms of theft, such as stealing from slot-machines and mail-boxes, are usual with children of very low intelligence, and that most of the other forms of theft are committed by children of about 75 I Q. Forgery, however, is generally confined to children who are normal or almost normal in intelligence. The more aggressive the form of theft the later it appears in the child's life. Stealing is closely associated with lying and to a less degree with various forms of aggressive behavior, such as fighting, truancy and running away.—*C. H. Johnson* (Boston Psychopathic Hospital).

3625. **Rieger, H. Religion und Minderwertigkeitsgefühl.** (Religion and the feeling of inferiority.) *Zsch. f. Religionspsychol.*, 1928, **1**, 41–61.—*A. Römer* (Leipzig).

3626. **Römer, A. Welche Fassung der Konfirmation erscheint dem Alter der 14 jährigen angepasst? Von der religionspsychologischen Seite her gesehen.** (What form of confirmation seems to be adapted to the age of 14-year-old children? Seen from the standpoint of the psychology of religion.) *Protestantenblatt*, 1928, **61**, 378–380.—The article puts the point of view of the problematic approach to life into the foreground and stresses the moral preparedness of the young Christian.—*A. Römer* (Leipzig).

3627. **Rothman, P. E. Delinquency and disease.** *J. Delinq.*, 1928, **12**, 22–25.—*H. L. Koch* (Texas).

3628. **Schairer, —. Medizin und Religion—ein Echo.** (Medicine and religion—an echo.) *Monatssch. f. Pastoraltheol.*, 1928, **24**, 91–97.—A discussion of the publication of the physician Otfried Müller.—*A. Römer* (Leipzig).

3629. **Schairer, J. B. Der Schlüssel der Erkenntnis.** (The key of knowledge.) *Neue kirchl. Zsch.*, 1928, **39**, 325–328.—Schairer calls this a biblical-psychological investigation. The revelation can be grasped only after the innermost sense has been touched and made active.—*A. Römer* (Leipzig).

3630. **Schlapp, M., & Smith, E. H. The new criminology: a consideration of the chemical causation of abnormal behavior.** New York: Boni & Liveright, 1928. Pp. ix + 325. $4.00.—A discussion of the causation of abnormal behavior, with particular emphasis on abnormal criminal behavior. The division is made in three books, the first dealing with free-will versus predestination. The premise is made that criminal actions are reactions caused for the most part

by the disturbed internal chemistry of the body. The adherents of heredity and environment as causative factors of crime are criticized. The theory of transmission of criminal activities in the germ cell is held to be unreasonable. Although it is held that sex does play a part as a causative factor in certain types of criminals, the theory of thwarted unconscious sexual cravings as etiological is ridiculed. Book II records superficially the embryology, physiology and pathology of the glands of internal secretion and the nervous system. Pathological glandular disorders are attributed to glandular imbalance in the mother during the period of gestation; clinical cases are described, accompanied by plates. In logical fashion the reader is then introduced to the relation between glandular defects, mental deficiency and mental defectiveness. Book III deals with a consideration of the intelligent criminal in whom no gross abnormality is noted on superficial examination. Thorough investigation of the authors has proved that in the majority of these cases the defect is in the endocrine system. The emotional center is controlled by the intellectual center, which acts as a safety valve; when the emotional center, through a disorganized or diseased glandular system, is not amenable to the check of the intellectual center, anti-social conduct follows. Thus we do not have free will, but are dependent on the reactions of our glandular system. Many case histories are employed to prove this contention. Appendices A, B, and C touch on the religious discussions of centuries as to free-will and predestination, the legal aspects of criminality, and a statistical study of treated cases, respectively. Of interest is the outline for the future study, treatment and care of criminals, a plea for the treatment of the individual criminal and for the discarding of the present system of treating crime with punitive measures.—*H. J. Crawford* (Sing Sing Psychiatric Service).

3631. **Schneider, C. Das Synthetische der religiösen Erkenntnis.** (The synthetic character of religious knowledge.) *Erbe Luthers* (*Ihmels-Festschrift*), 1928, 184–214.—*A. Römer* (Leipzig).

3632. **Schneider, C. Experimentelle Studien zum Gotteserleben.** (Experimental studies of the experience of God). *Zsch. f. Religionspsychol.*, 1928, **4**, 51–62.—*A. Römer* (Leipzig).

3633. **Schwarz, H. Gott. Jenseits von Theismus und Pantheismus.** (God. Beyond theism and pantheism.) Berlin: Junker u. Dünnhaupt, 1928. Pp. viii + 212. M. 12.—The author, a well-known religious philosopher, continues in this book his former studies and develops his concept of divinity in its various manifestations.—*A. Römer* (Leipzig).

3634. **Seelinger, A. Das Gebet und die Naturwissenschaft.** (Prayer and natural science.) *Unser Vaterland*, 1928, **4**, 178–180.—One should not be satisfied with the assumption of active forces, but should also acknowledge the directing and guiding forces.—*A. Römer* (Leipzig).

3635. **Simmons, E. L. Psychiatric signposts.** *Survey*, 1928, **60**, 104–105.—A report of a three-year state-conducted psychiatric study of inmates in the county penal institutions of Massachusetts under the direction of the Division for Examination of Prisoners of the Department of Mental Diseases. A recent classification shows the following distribution of problems: alcoholism 31%, psychopathic delinquents nearly 9%, mental disease and epilepsy nearly 4%, defective delinqunents nearly 5%, feeblemindedness 3%, "self-correcting after sentence" 14%, "hopeless" 4%, miscellaneous 4%, needing guidance in community 28%.—*D. Grauer* (Chicago, Ill.).

3636. **Smith, H. To punish—or to reform.** *Welfare Mag.*, 1928, **19**, 932–934.—The writer, a youthful prisoner, contrasts and criticizes the methods of penitentiaries and reformatories.—*L. Ackerson* (Institute for Juvenile Research).

3637. **Spencer, B., & Gillen, F. J. The Arunta; a study of a Stone Age people.** 2 vols. New York: Macmillan, 1928. Pp. 418–657. $14.50.—*W. S. Hunter* (Clark).

3638. **Traub, F. Philosophischer und religiöser Wirklichkeitsbegriff.** (The philosophical and religious concept of reality.) *Zsch. f. Theol. u. Kirche, Neue Folge*, 1928, **9**, 81–98.—The author discusses the idealistic, realistic, and transcendental-phenomenal concepts of reality. The concept of reality of theology is rooted in practical life.—*A. Römer* (Leipzig).

3639. **von Weisl, W. Zwischen Religion und Krankheit. Das Problem der stigmatisierten Jungfrau Therese Neumann von Konnersreuth.** (Between religion and disease. The problem of the stigmatized girl Therese Neumann of Konnersreuth.) *Zsch. f. Religionspsychol.*, 1928, **4**, 1–50.—*A. Römer* (Leipzig).

3640. **Williams, F. E. Orokaiva magic.** London: Oxford Univ. Press, 1928. Pp. xii + 225.—The book consists of three essays, originally presented as Anthropological Reports to the Papuan Government, which discuss (1) the taro cult, a study of a primitive religious movement, (2) the garden culture of the Orokaiva, (3) Orokaiva magic. The first essay concerns itself with the rise and spread of the worship of the taro, which is the chief foodstuff of the natives, and describes the rites and ceremonies, involving feasting, dancing, and shaking-fits, known as *jipari;* the last named phenomenon is discussed in some detail. The second essay describes the agricultural methods of the Orokaiva, and one section is devoted to descriptions of garden magic, i.e., means of making the crops grow. The last essay deals with the forms of magic; procedure, symbols, logic, specifics used, good and bad magic, and the fear of magic. All the material is either the result of conversation with the natives, or of the personal observations of the author.—*J. C. Spence* (Clark).

3641. **Williams, H. M. A note in regard to the extent of the vibrato.** *Psychol. Monog.*, 1928, 38, No. 4. *Univ. Iowa Stud. Psychol.*, No. XI.—Schoen was in error in asserting that the extent of the vibrato is the same throughout the entire range of the voice.—*F. A. C. Perrin* (Texas).

3642. **Willoughby, R. R. Liberalism, prosperity and urbanization.** *J. Genet. Psychol.*, 1928, **35**, 134–137.—Analysis of the subscription figures of *The Nation* shows that those states tend to be most liberal that are most urbanized and most prosperous.—*J. F. Dashiell* (North Carolina).

3643. **Willoughby, R. R. A group of seven correlated social variables.** *J. Genet. Psychol.*, 1928, **35**, 331–334.—Intercorrelations are shown for suicide, divorce, religion, insanity, liberalism, urbanization, and prosperity.—*J. F. Dashiell* (North Carolina).

3644. **Woodhull, C. Fashions in crime.** *Welfare Mag.*, 1928, **19**, 883–890.—"Through the ages we find the fashions in crime set by the anti-social performances of persons possessing culture and refinement. The less ingenious criminal follows the popular trend, thus continuing until the sun of the era has set and the dawn of a new age brings forth new possibilities and many modulations in style." This principle is illustrated in the famous criminal trends in history: the ancients who "slew," the ancient and medieval poisoners, the pirates, the Mafia and Camorra, the apaches of Paris, and the Bushrangers and outlaw bands in America after the Civil War.—*L. Ackerson* (Institute for Juvenile Research).

3645. **Young, K. Story of the rise of a social taboo.** *Scient. Mo.*, 1928, **26**, 449–453.—The veneration of the Mormons for the gull is traced to the date of their deliverance by this bird from an invasion of crickets which by consumption of vegetation was threatening the life of their colony.—*J. F. Dashiell* (North Carolina).

3646. **Zeller, L. Phantasie und Frömmigkeit.** (Phantasy and piety.) *Zsch. f. Aszese u. Mystik*, 1928, **3**, 101–114.—Treats chiefly the value of phantasy in shaping the religious life.—*A. Römer* (Leipzig).

[See also abstracts 3359, 3365, 3425, 3477, 3478, 3481, 3483, 3490, 3492, 3529, 3558, 3572, 3661, 3673, 3690, 3732, 3740, 3741, 3746, 3750, 3751, 3758.]

INDUSTRIAL AND PERSONNEL PROBLEMS

3647. **Bingham, W. V. Industrial psychology.** *Rep. Proc. 1928 Cambridge Cong., Int. Indus. Relations Assoc.*—Influences limiting the progress of industrial psychology in the United States have been: the backwardness of the science itself; the demand for services of psychologists in other directions, notably in education; and the tradition among psychologists that many questions of industrial psychology are the exclusive prerogative of the management engineer. Psychological problems have been recognized in connection with the individual worker's relations to his work, his fellow-workers, his supervisor, the management, and the entire circle of contacts outside the factory. The social psychology of relations between groups of workers, managers, and public, is no less important. These industrial relations have been influenced in three ways: by psychology as science, as point of view, and as method. Facts about the nature of individual differences, the specificity of abilities, and the laws of learning, of interest, and attention, have modified industrial practice. Use of statistical techniques is spreading, but controlled experiment has been sadly neglected. In conclusion, mention is made of agencies for furthering industrial psychology in America.—*W. V. Bingham* (Personnel Research Federation).

3648. **Blumenfeld, W. Versuch einer Theorie der Uebungsvorgänge.** (Essay toward a theory of the practice process.) *Psychotechn. Zsch.*, 1928, **3**, 30–34.—With practical examples as a basis, the author seeks to analyze the practice process. In this analysis the principal point is a certain experience of tension, in which impelling forces of the last end are determinative for changes of the inner experience in the course of the performance. These impelling forces are mostly named "interest." The author draws a contrast between "circumscribed" and "functional" practice, these being newly proposed special concepts.—*F. Giese* (Stuttgart).

3649. **Bureau of Public Personnel Administration Staff. Information and data regarding tests in the short-answer form.** *Pub. Person. Stud.*, 1928, **6**, 178–182.—(1) Tests for store-keeper. Tabulations of scores for 21 subjects on three short-answer form tests indicated a narrow range amounting to less than one-third the available scale. The reliability coefficient was .83. (2) Tests for junior clerk. Six different forms of the tests are now available, but with slight differences in difficulty. A table of percentile norms is given based on 1629 scores. Correlations of parts of the battery with total score range from .53 to .83. Intercorrelations among tests vary from .19 to .53. Partial correlations for test members, all others held constant, with total score .21 to .75. Tests for alphabetical filing, social intelligence, and business information make largest individual contributions. The test for social intelligence shows least in common with other tests. No adequate data on validity yet available.—*K. M. Cowdery* (Stanford).

3650. **Bureau of Public Personnel Administration Staff. Suggested tests for storekeeper.** *Pub. Person. Stud.*, 1928, **6**, 183–187.—Tests are suggested for the selection for employment of storekeepers for duties and with qualifications as listed with salary range approximately $1800 to $2400. The tests include memory for oral directions, storekeeping practices and procedure, business arithmetic, true-false items regarding storekeeping situations, and ability to understand and follow written directions. Education and employment records and a physical examination are advised, but to be used more or less independently of the rest of the battery. The test material is as yet unstandardized.—*K. M. Cowdery* (Stanford).

3651. **Couve, R Über die Untersuchung des Lochkartenpersonals bei der Deutschen Reichsbahn.** (The examination of persons working with punched cards in the German Imperial Railway.) *Indus. Psychotechn.*, 1927, **4**, 91–93.—

A series of eight tests was given to 31 employees and is said to have proved successful in selecting the better workers. The tests aimed to measure special abilities which the work of Hollerith operators seems to require.—*A. W. Kornhauser* (Chicago).

3652. **Jensen, M. B. Objective differentiation between three groups in education (teachers, research workers, and administrators).** *Genetic Psychol. Monog.*, 1928, **3**, No. 5, 335–454.—An attempt was made in this study to develop three diagnostic scales, the first to differentiate between teaching and research abilities, the second between administrative and research abilities, and the third between teaching and administrative abilities. These scales were validated upon the responses of 205 American educators and psychologists who were selected on the basis of ratings of from one to seven prominent educators. The following tests were employed: (1) Position Preference Ratings, (2) Discipline Case Problems, (3) Truthfulness Ratings, (4) High School Activities, (5) Interest Report Blank, certainty ratings on two of these tests, and some material from personal data sheets. An abbreviated form of this battery, composed of Tests 1, 2, and 4, is published under the title of the Stanford Educational Aptitude Test (reliability .90). Differences as revealed by the original scales are summarized as follows: Administrators are taller, heavier, and older than teachers, who are in turn taller, heavier, and older than research workers; this same order prevails in regard to traditional-mindedness in dealing with disciplinary cases, in the direct handling of administrative problems, and in the positiveness of the accuracy of their judgments. Administrators are more money-minded and more concerned with opportunity for promotion than either of the other groups, while the latter are more concerned with opportunity for educational advancement. The Interest Report Blank data revealed marked differences in the likes and dislikes of the three groups. An appendix presents the test materials and scoring keys. Bibliography of 36 titles. Abstracts in French, German, and Russian.—*L. M. Harden* (Clark).

3653. **Klutke, O. Eignungsprüfungen bei der Reichspost.** (Aptitude tests in the imperial postal system.) *Indus. Psychotechn.*, 1927, **4**, 65–84.—Sketches the psychological testing work done in the postal service prior to May, 1926, at which time the work was discontinued by official order. Brief descriptions are given of several occupations and of the tests developed for them—operators of the new types of telegraphic transmitting apparatus, mail sorters, and telegraph construction workers. The tests include the deciphering of almost illegible writing, comparing texts and codes, learning simple operations on the keyboard of a telegraph machine, card sorting, etc. Short studies are reported, giving a comparison of scores on repeated tests, a comparison of scores with ratings of success in the work, a record of variations in the per cent of unacceptable applicants, and an estimate of the financial saving produced through the use of the tests.—*A. W. Kornhauser* (Chicago).

3654. **Landis, C., & Phelps, L. W. The prediction from photographs of success and vocational aptitude.** *J. Exper. Psychol.*, 1928, **11**, 313–324.—"Vocational success or failure cannot be predicted or judged from photographs."—*S. Renshaw* (Ohio State).

3655. **Lewin, K., & Rupp, H. Untersuchungen zur Textilindustrie.** (Investigations in the textile industry.) *Psychotechn. Zsch.*, 1928, **3**, 51–63.—An account of industrial investigations for the purpose of obtaining an occupational picture of industrial activities: hiring men, technical operation, field description, application of the results to improvement in management. Numerous and novel pictures and tables support the text.—*F. Giese* (Stuttgart).

3656. **Nixon, H. K. Psychology for the writer.** New York: Harper, 1928. Pp. xiii + 330. $2.50.—This book aims, first, to give a unified way of looking at human nature, and second, to introduce the scientific study of human behavior

in relation to writing. Psychology is first considered as a storehouse from which the writer may draw material. Motivation, psychological twists, and the rôle of sex are discussed. There are four fundamental elements of every story: the felt want, the obstacle, the struggle; the adjustment. Any story, reduced to essentials, portrays the satisfaction or denial of an instinctive want. The second part of the book considers psychology as a tool and tries to determine how literary effects are produced, what words, titles or situations are agreeable or of general interest, and why. The writer who wishes to appeal to a large audience must study the psychology of the average individual. Other things being equal, the maximum effect on the reader will be produced by writing which pictures the satisfaction of desires that in the reader's own life are extremely strong and extremely repressed. A chapter is devoted to criticism—mostly adverse—of previous attempts at analysis of authors and their works. Creative imagination is found to be a normal mental process, and is subject to practice and improvement. There are a number of illustrative diagrams, and a bibliography of two hundred titles.—*M. P. Montgomery* (Faribault, Minn.).

3657. **Poppelreuter, W. Die Arbeitskurve in der Diagnostik von Arbeitstypen.** (The work curve in the diagnosis of types of work.) *Psychotechn. Zsch.*, 1928, **3**, 35–51.—On the basis of numerous illustrations and experiments, and especially the registration of the course of performance by the *Arbeitsschauuhr* (work-registering clock), the author demonstrates that brief tests and continued behavior of the testee, performance in difficult work and fine manipulation, occupational exactness, monotony, work tempo, variation in work, share in errors, strain of attention, and total personality type (when respectively presented) may be successfully interpreted by self-registering work curves. For the continued success of a diagnosis, therefore, the author recommends work-analysis in suitably planned experiments.—*F. Giese* (Stuttgart).

3658. **Schultz, J. H. Nervosität und Beruf. Vorläufiger Bericht über eine Fragenbogenforschung.** (Nervousness and occupation. A preliminary report on a questionnaire investigation.) *Psychol. u. Med.*, 1928, **3**, 28–39.—Hereditary nervous tendencies may remain latent unless environment is unfavorable. Formerly the importance of external factors was overestimated. Then came a fatalistic view of nervousness as constitutional and incurable. The modern view recognizes developmental and functional disturbances that yield to hygiene and psychotherapy. The author reviews the literature of the relation between occupation and nervousness and gives a questionnaire of 52 items which he is submitting to persons in various callings, to determine not only which kinds of work arouse nervous tendencies, but also how the characteristic symptoms vary from one occupation to another. He promises to announce the results of this investigation later. The purpose of this preliminary report is to lead others to conduct similar investigations.—*M. F. Martin* (West Springfield, Mass.).

3659. **Vernon, H. M., Bedford, T., & Warner, C. G. A study of absenteeism in a group of ten collieries.** *Rep. Indust. Fatigue Res. Board.* No. 51. London: H. M. Stationery Office, 1928. Pp. iv + 68. 2/6.—The absenteeism of 23,000 miners working in a group of 10 neighboring collieries was studied for periods of 21 months to 6 years. Total absenteeism was found to increase in depth of the workings. Absenteeism from sickness increased with increase of temperature and of air velocity. The number of minor accidents increased with increase of temperature and depth of the workings, and was also greater in pits with a high average output of coal per man, and with a high labor turnover; but the number of major accidents was unaffected. This differential accident rate appears to point to the fact that the decision of the miner to return to work after an accident depends not only upon his recovery from his injury, but also upon the satisfactoriness of his working conditions. The total accident rate was greatest where the seam was thickest; and was at a minimum for men aged

30 to 39 years. Voluntary absenteeism increased with increase in the distance walked underground, the distance of the men's homes from the collieries, and the proximity to large towns; it was high where labor turnover was high.—*M. D. Vernon* (Cambridge, England).

3660. **Viteles, M. S. Psychology in industry.** *Psychol. Bull.*, 1928, **25**, 309–340.—A review of publications appearing since April, 1926. In vocational selection they include both general treatments and experimental studies, the latter being devoted largely to the devising of tests and rating scales for a wide range of occupations. Some general and experimental studies in merchandising have appeared; and miscellaneous problems (accidents, employee training, motivation, etc.) have received attention.—*J. F. Dashiell* (North Carolina).

3661. **Weber, W. Die Bedeutung der Psychotechnik für die zivilrechtliche Haftpflicht.** (The significance of psychotechnics with respect to responsibility under the civil law.) *Indus. Psychotechn.*, 1927, **4**, 85–91.—Many points of civil law offer problems for the psychologist—especially varied problems concerning responsibility and carelessness. Psychotechnics can be particularly useful in helping the employer reduce his responsibilities for damages caused by incapable workers and unsound working conditions.—*A. W. Kornhauser* (Chicago).

[See also abstracts 3360, 3516, 3711, 3749.]

CHILDHOOD AND ADOLESCENCE

3662. **Blanchard, P. The child and society.** New York: Longmans, Green, 1928. Pp. 360. $2.00.—*W. S. Hunter* (Clark).

3663. **Bott, E. A., Blatz, W. E., Chant, N., & Bott, H. Observation and training of fundamental habits in young children.** *Genetic Psychol. Monog.*, 1928, **4**, No. 1, 1–161.—This monograph consists of a group of papers reporting observations at the Nursery School Division of St. George's School for Child Study at the University of Toronto. Each study analyzes the observations of a routine situation in an attempt to formulate from the observed facts of practice some standards of actual behavior. An essential point was the development of a methodology for making such observations. The habits considered concern (1) sleep, (2) play, (3) eating, (4) control of the bladder, and (5) attendance. Data on sleep were obtained from (1) 13 nursery school children, 2 to 5 years old, over a period of 30 weeks, and (2) from observations of 102 children, 1 to 11 years old, made by 66 mothers of the parent education group. Data from group (1) indicate that the number of children in the room does not interfere with the sleep of children who have acquired good habits of sleeping; that in the early years day sleep reinforces night sleep, but later interferes with it; and that day sleep begins to disappear after the third year and does so on the all or none principle. From the data of group (2) norms are suggested for duration of sleep, time of sleep, etc. The play activities of 15 children were observed over a period of two years. Methods were devised for recording observations made in relation to the material of play, and in relation to the social situations (both with adults and with other children). Empirical categories of social behavior were tried out in order to canvass the possibility of securing norms of social development in young children. The development and span of attention are treated as shown by frequency of choice and length of time which was given to a particular toy when free choice was possible. Six objective criteria pertaining to the development of eating habits are suggested: application, motor inhibition, choice of tools, technique of eating, motor coordination, and tidiness. The combined score on these criteria gave a positive correlation of .81 with C. A. Treatment based upon principles of re-education was used in dealing with

enuresis. In general it was found that "no incentive other than the desire for a dry bed and unsoiled clothes, with the self-respect that goes with these, will persist to the end." The average attendance of the group of 18 children during 1926–1927 was 65.9%. The most frequent cause of absence was the common cold. References are given in connection with each subject treated. An abstract of the article is given in French, German and Russian.—*L. M. Harden* (Clark).

3664. **Carmichael, A. M. To what objective stimuli do six-year-old children respond with intentional misrepresentation of facts?** *J. Genet. Psychol.*, 1928, **35**, 73–83.—From descriptions written by relatives or others, the author found that in nearly all the situations in which the children lied, they had committed some non-conforming act, were frustrated in handling property, were competing, were being forced into some unpleasantness, or were being frustrated from some pleasantness. Statistical analyses are offered.—*J. F. Dashiell* (North Carolina).

3665. **Cooper, M. L. Seven psychological portraits: a handbook for parents and teachers.** Milwaukee: Morehouse, 1928. Pp. xii + 181. $2.00.—The first chapter recites the familiar ideas that children are not small adults, that they possess adult potentialities, that the point of view of child study has changed, that at different ages children behave differently. The ensuing chapters present seven brief composite descriptions of the child in infancy, early, middle, and later childhood, and early, middle, and later adolescence. These portraits are highly generalized and the demarcations between ages are specifically described. The point of view throughout is that of the religious educator. The final chapter announces that the three great influences in a child's life are Home, Church, and School, and that these need to work in harmony.—*J. C. Fenton* (Whittier, Calif.).

3666. **Cowan, E. A. Results of motor reconditioning methods used in training a backward child.** *J. Genet. Psychol.*, 1928, **35**, 98–104.—A child after illness of many months' duration in early infancy, shows exceedingly poor motor coordinations as well as social-emotional attitudes of a dependent type and low I Q. Persistent training in motor activities, without much visual guidance, gradually corrected the first condition, and in its train the other two. Explanation is offered in terms of the child's lack of development during the early illness of the fundamental-kinesthetic-motor functions, and her dependence upon visual cues to movement; and then a reconditioning of her movements to the kinesthetic type of stimulations, with consequent improvement in emotional and intellectual functions ultimately based thereon.—*J. F. Dashiell* (North Carolina).

3667. **Davis, R. A. The study of orphan children in Texas.** *J. Delinq.*, 1928, **12**, 1–21.—1051 children residing in 6 different orphanages in Texas and scholastically placed in grades from 2 to 8 were tested with the Dearborn Group Intelligence Tests, Series I and II, and the Haggerty Intelligence Examinations, Delta I and II. The performance on the tests of the orphanage groups was distinctly inferior to that of a sample (504) of the school children of the state, the mean I Q of the orphans being 85.5 and 86.2, that of the school children 97.2 and 99.2, as determined by the Dearborn and Haggerty tests, respectively. Interpreting the test performance of the orphanage inmates as indicative of intellectual inferiority, the author discusses some of the pedagogical questions involved in the effective handling of groups so characterized.—*H. L. Koch* (Texas).

3668. **Deardorff, N. R. Child-welfare conditions and resources in seven Pennsylvania counties.** Washington: Gov't Printing Office, 1927. Pp. 312. $0.40.—*W. S. Hunter* (Clark).

3669. **de Sanctis, S. Intuitions of children.** *J. Genet. Psychol.*, 1928, **35**, 18–25.—A non-logical or prelogical type of thinking has been recognized by many in the cognitive processes of adults and children. Experimental approach

has been made in several experiments in the Rome laboratory, all taking the general form of testing ability to estimate quantities, sizes, forms, and distances of physical objects and visual patterns, and to estimate number of taps made on a tapping test, frequently by reference to other sizes, etc., and without using numerical symbols. In such tests normal children tended to render better judgments than defective children, and these better than normal adults. It is held that children's perceptions are unanalytical and "syncrete" while adults' are analytical and rational (in these experiments, arithmetico-geometrical); and the antithesis is emphasized, especially as having a bearing upon mental pathology and defect.—*J. F. Dashiell* (North Carolina).

3670. **Elkine, D. De l'orientation de l'enfant d'age scolaire dans les relations temporelles.** (Orientation in temporal relations of the child of school age.) *J. de Psychol.*, 1928, **25**, 425–429.—71 children between 10 and 13, 68 between 13 and 15, and 13 over 15 years of age, 68 of them boys and 84 girls, were required to judge various intervals of time. The intervals chosen were 5, 10, 15, and 30 seconds and 1, 2, 3, and 5 minutes. The experimenter struck the table with his hand, and, after the determined time, the child was to do likewise, the time being measured to the fiftieth of a second by means of a chronometer. The following results were obtained: (1) the appreciation of the interval of time presented large errors; (2) the exactness of the appreciation (as far as 1 minute) was proportional to the magnitude of the time measured, i.e., the longer intervals were more exactly discriminated than the shorter; (3) the optimum evaluation of the duration occurred between 30 seconds and 1 minute; (4) the larger intervals were usually depreciated while the smaller were exaggerated; (5) the condition of the individual was a considerable factor; (6) the boys appreciated more regularly the long intervals, the girls the short intervals; (7) "The magnitude of the subjective time depends upon the number of motor acts, the psycho-neural organization, and in particular, the duration of concentrated attention."—*N. L. Munn* (Clark).

3671. **Foster, J. C. Verbal memory in the pre-school child.** *J. Genet. Psychol.*, 1928, **35**, 26–44.—An experimental study of the learning of sensible prose material by 31 children of the Institute of Child Welfare, Minnesota, yielded curves for learning and re-learning, the former showing no tendency to flattening. The rate of learning correlated positively with chronological and with mental age and with the individuals' "responsiveness." Massed readings were disadvantageous. The boys made higher average scores than the girls. The more mature children made not only more correct responses but also more incorrect ones.—*J. F. Dashiell* (North Carolina).

3672. **Foster, J. C., Goodenough, F. L., & Anderson, J. E. The sleep of young children.** *J. Genet. Psychol.*, 1928, **35**, 201–218.—Data regarding the amount of sleep taken by 1186 children under eight years of age were obtained from questionnaire returns from mothers on the mailing list of the Institute of Child Welfare, Minnesota, during the month of October. The mean amount of sleep at the different ages was less than that recommended by writers on child welfare. Decreases with advancing age were due to reduction of the day nap; but length of night sleep showed little change. Over a seven-day period the mean variation remained nearly constant for all ages. No sex differences were apparent.—*J. F. Dashiell* (North Carolina).

3673. **Frisch, F., & Hetzer, H. Die religiöse Entwicklung des Jugendlichen (auf Grund von Tagebüchern).** (The religious development of young people, based on diaries.) *Arch. f. d. ges. Psychol.*, 1928, **62**, 409–442.—The attitude of the child towards his environment is different from that of the youth whose religiousness is without external influence. 627 passages about religion in 40 diaries were used.—*A. Römer* (Leipzig).

3674. **Fuller, E. (Ed.) International handbook of child care and protection.** New York: Longmans, Green, 1928. (3rd Ed.) Pp. 659. $4.00.—*W. S. Hunter* (Clark).

3675. **Goodenough, F. L. Studies in the psychology of children's drawings.** *Psychol. Bull.*, 1928, **25**, 272–283.—110 contributions are reviewed. They include observational studies, tests and scales, pedagogical analyses, analyses of talent, correlations with other functions, and comparisons with the insane and with primitive man.—*J. F. Dashiell* (North Carolina).

3676. **Heller, T. Über Psychologie und Psychopathologie des Jugendlichen.** (Psychology and psychopathology of youth.) Wien: Springer, 1927. Pp. 91. 3.60 M.—Introduction to the psychology and psychopathology of youth, for educators, teachers and officers in charge of the young.—*H. Busemann* (Greifswald).

3677. **Hollander, B. Mental abilities and character disposition of children.** *Ethol. J.*, 1928, **13**, 40–44.—"Whether a youth will have the ambition and perseverance necessary for intellectual supremacy, whether he will follow the path of virtue, dissipation, or vice, will depend at least as much on the organisation of his brain as on any subsequent training." "Excluding conditions of health and chance circumstances success in life may be said to depend principally on two factors: ability and character." These two quotations will locate the point of view. A table of questions to ascertain the abilities and character dispositions of a child is given.—*F. M. Teagarden* (Pittsburgh).

3678. **House, S. D. The problem of childhood.** *J. Delinq.*, 1928, **12**, 25–42.—A questionnaire containing queries concerning traits indicative of maladjustment in childhood as well as in adult life was given to 120 psychoneurotic and 540 so-called normal adults. The normal group, of course, tended to report on the average, as far as their adult life was concerned, fewer traits of psychoneurotic import than did the abnormal. For childhood traits the reverse was true. The author expounds 12 theories which might account in whole or in part for this anomalous situation.—*H. L. Koch* (Texas).

3679. **Katz, D. Psychologische Probleme des Hungers und Appetits, insbesondere beim Kinde.** (Psychological problems of hunger and appetite, especially in the child.) *Zsch. f. Kinderforsch.*, 1928, **34**, 158–197.—The author recorded verbatim conversations with his two children, aged 6 and 8 years, analyzed these conversations, and thus gained new insight into the problems of hunger and appetite in the child. He defends the two-component theory of hunger, according to which hunger depends not only upon internal states but also upon the external situation. He considers, among other problems, the question whether there is a regular relation between bodily constitution and individual taste. He tried to determine also the ratio of the intensity of motivation of hunger to that of thirst, in some cases. The importance of water in the economy of living substance is manifested in the mighty urge toward the quenching of thirst. The child's feelings of hunger seem to be bound, as complexes, to particular situations, in far higher degree than are those of the adult.—*O Seeling* (Berlin).

3680. **Kawin, E. The pre-school child. The habit of a normal appetite.** *Welfare Mag.*, 1928, **19**, 832–837.—The physical and psychological causes and the treatment of inadequate and capricious food habits among young children are discussed.—*L. Ackerson* (Institute for Juvenile Research).

3681. **Kawin, E. The pre-school child. Enuresis.** *Welfare Mag.*, 1928, **19**, 985–990.—The problem of bed-wetting in children is discussed with reference to causation and treatment and a case history described.—*L. Ackerson* (Institute for Juvenile Research).

3682. **Kirkland, I. M. The Springfield Clinic: the history and procedure of a visiting clinic from the Institute for Juvenile Research.** *Welfare Mag.*, 1928, **19**, 367–372; 517–521; 672–676; 818–822.—A description is given of the activi-

ties of a typical children's behavior clinic sponsored by the Illinois Department of Public Welfare and the type of children's cases handled.—*L. Ackerson* (Institute for Juvenile Research).

3683. **Kupky, O. Jugendlichen-Psychologie.** (The psychology of youth.) Leipzig: Dürr, 1927. Pp. 122. 3.90 M.—An introduction to the psychology of youth, strongly influenced by the work of Ch. Bühler; it is readable, clearly written, and answers its purpose. It is designed for the use of educators, teachers, etc.—*H. Busemann* (Greifswald).

3684. **Lehman, H. C. The child's attitude toward the dog versus the cat.** *J. Genet. Psychol.*, 1928, **35**, 62–72.—A questionnaire on play activities of children indicated that the dog is a favorite over the cat, especially for boys. In accounting for this the author lists various differences in behavior deducible from the fact that the dog is descended from a gregarious, the cat from a solitary, type of animal.—*J. F. Dashiell* (North Carolina).

3685. **Lehman, H. C., & Wilkerson, D. A. The influence of chronological age versus mental age on play behavior.** *J. Genet. Psychol.*, 1928, **35**, 312–324.—Does acceleration of school progress tend to make for social maladjustment in the bright child? Questionnaire data from over 6000 children as to their play activities were compared with their C.A. and M.A. The boys were arranged in M.A. groups around each C.A. level, and in C.A. groups around each M.A. level; and the influences on play activities of variations in the one and in the other age were tabulated. C.A. appeared the more potent.—*J. F. Dashiell* (North Carolina).

3686. **Levy, D. M., & Patrick, H. T. Relation of infantile convulsions, head-banging and breath-holding to fainting and headaches (migraine?) in the parents.** *Arch. Neur. & Psychiat.*, 1928, **19**, 865–887.—An attempt to establish the frequencies of these symptoms and their correlations by a study of unselected groups of children and their parents in five small communities. Parents who fainted or who had periodic headaches were more likely to have children who had infantile convulsions, temper with head-banging or breath-holding, and other recurrent attacks, especially spells of vomiting and fainting. Parents who fainted were more likely to have such children than parents who had periodic headaches but remained free from fainting. Parents who had frequent periodic headaches were more likely to have such children than those whose headaches were infrequent. The same was true of fainting. Conversely, the "explosive symptoms" in children were in correlation with each other and with fainting and periodic headache in the parents.—*L. M. Hatfield* (Boston Psychopathic Hospital).

3687. **R., C. Piaget incompres.** (Piaget misunderstood.) *Criterion*, 1928, **13**, 200–202.—Comment on an article in *J. de Psychol.*, in which the ideas of Piaget regarding the child mind are restated in answer to certain critics. Piaget's thesis is: "The thought of the child differs from ours because of a difference in its logical structure, and not merely because of vigor in ratiocination nor because of the sum, more or less great, of acquired concepts." For Piaget, what is important is not the age at which a certain phenomenon occurs, but the order in which mental acquisitions are made. To him *sincretisme* (Claparède), a function characteristic of children, is due not to a deficient power of analysis, but to a typical mental structure. Bibliography.—*C. Burson* (Newcomb-Tulane).

3688. **Seabury, D. The new ethics in child training.** New York: Boni & Liveright, 1928.—*W. S. Hunter* (Clark).

3689. **U. S. Children's Bureau. References on the physical growth and development of the normal child.** Washington: Govt. Printing Office, 1927. Pp. 359. $0.50.—*W. S. Hunter* (Clark).

3690. **Williams, H. D. Boys: scientific factors used in boys' work.** *Welfare Mag.*, 1928, **19**, 772–778.—"Boy workers have as their objective the modi-

fying of the reactions of a boy so that his behavior will conform to the social sanctions of the community. . . . The scientific attitude . . . assumes a cause and effect relationship in the field of human behavior that is just as invariable as in other fields. . . . It means that no single element entering into a behavior situation shall be ignored. . . . In an examination of approximately one thousand boys and girls coming before the Juvenile Court of Toledo during the last three years over two hundred and twenty causes were found entering into the etiology of their delinquencies." The contributions of biology, physiology, sociology, psychology and psychiatry to this field are briefly summarized. The relative frequency of such causal factors as emotional instability, abnormal introversion and extroversion, abnormal suggestibility, mental conflict, defective heredity and developmental conditions, lack of home supervision and discipline, friction in the family, death of parent, bad companionship, etc., among the thousand children are stated.—*L. Ackerson* (Institute for Juvenile Research).

3691. **Wilson, D. F. Child psychology and religious education.** New York: Doubleday Doran, 1928. Pp. 158. $1.75.—An outline of religious education during childhood (first twelve years). During infancy all religious training should be carried on through suggestion, imitation, stories and rhymes. Memory is a good tool to use only when conditions favor interesting, understanding and appreciative repetition of the material learned. In early childhood, opportunity should be given for self expression by means of dramatization, drawing, handwork, compositions, etc. In middle childhood, when interest in others begins to be more marked than interest in self, the stories of the Bible may be made realistic by encouraging the experiencing through the imagination some of the events described. At this time, also, appear questions on origin, Nature, etc.; these should all be answered. In later childhood, when there is need for physical expression, the project method proves valuable. This is the age of hero-worship; there should, therefore, be much use of biographies. Bibliography of 3 pages.—*M. Goodrie* (Clark).

3692. **Wagoner, L. C., & Armstrong, E. M. The motor control of children as involved in the dressing process.** *J. Genet. Psychol.*, 1928, **35**, 84–97.—Nursery school children were studied to devise a test of maturity in the matter of dressing. Jackets with buttons and buttonholes were found to yield results correlating fairly with results on performance tests, though not with those on Binet type nor on anatomical measurements, and also correlating exceptionally highly with ratings on self-reliance, perseverance, and interest in detail.—*J. F. Dashiell* (North Carolina).

3693. **Warden, C. J. Notes on a male infant.** *J. Genet. Psychol.*, 1928, **35**, 328–330.—Notes on behavior with mirror, on motor coordination, on emotional responses, etc.—*J. F. Dashiell* (North Carolina).

3694. **Witty, P. A. Some results of a pre-school clinic.** *J. Genet. Psychol.*, 1928, **35**, 139–141.—Relations between mental ability and parental occupation, sex, and physical traits.—*J. F. Dashiell* (North Carolina).

[See also abstracts 3485, 3550, 3624, 3626, 3698, 3713, 3755.]

EDUCATIONAL PSYCHOLOGY

3695. **[Anon.]. Grading the professors.** *School & Soc.*, 1928, **28**, 311–314.—A scathing invective against the system of evaluating a college instructor's teaching efficiency by means of student opinion.—*H. L. Koch* (Texas).

3696. **Beall, E. Essential qualities in certain aspects of physical education with ways of measuring and developing the same.** *Amer. Phys. Educ. Rev.*, 1928, **33**, 390–397.—163 college women were given a muscular coordination test of stabbing a foil at a target. This group was then trained in tennis using the

various strokes. After this the original coordination test was given again with the following results: 45% improved their score, 35% made a lower score, and 20% remained the same.—*R. Stone* (Clark).

3697. **Bowers, S. M. Fear, a plea for rational teaching.** *Welfare Mag.*, 1928, **19**, 744–746.—Children's fears are discussed.—*L. Ackerson* (Institute for Juvenile Research).

3698. **Brownell, W. A. The development of children's number ideas in the primary grades.** *Sup. Educ. Monog.*, 1928, No. 35. Pp. xiii + 241.—A total of 1858 children in the first seven grades in eight schools from three different Illinois cities were required to estimate the number of dots on a series of cards exposed for five-second periods. The six different principles of arrangement illustrated below were used for group of dots, ranging from 3 to 12 in number: quadratic (⁘); diamond (⁙); domino (⁖); triangular (∴); odd (⁘); linear (.....). A previous study by Howell in which only the quadratic pattern was used had led to the conclusion that certain numbers are intrinsically easier to apprehend than others; that odd numbers are essentially more difficult than even numbers, hence a proportionately greater amount of time should be devoted to insuring their mastery in the primary grades. The results obtained in this study show that, apart from differences in arrangement which facilitate the recognition of certain numbers rather than others, the true order of difficulty is that of the notation system. An attempt was then made to ascertain the relationship between the ability to apprehend visual concrete numbers and the ability to handle abstract number concepts. Approximately thirty-five children in each of the first four grades of a Chicago school were given the group tests previously described, also simple tests in abstract addition of two and three digit columns. Following the group tests, each child was tested individually and the process which he utilized in performing these tasks were ascertained. A considerable degree of similarity between the methods used in apprehending the concrete numbers and used in abstract addition was found. An analysis of the steps by which children progress from the concrete to the abstract in dealing with number relationships led to the conclusion that too early memorizing of abstract combinations may lead to serious handicaps later on; and that the amount of time necessary for acquiring an adequate concrete understanding of numerical values is much greater than is commonly supposed.—*F. L. Goodenough* (Minnesota).

3699. **Burr, A. W. Who's who in our classes?** *School & Soc.*, 1928, **28**, 274–276.—Methods are suggested for locating the capable pupils in a class and for keeping them adequately motivated.—*H. L. Koch* (Texas).

3700. **Commins, W. D. The effect of education on original differences.** *Cath. Univ. Amer. Educ. Res. Bull.*, 1927, **3**, No. 7. Pp. 38.—A critical review of original differences in achievement, concluding that the experimentation to date indicates that "the influence of education is to make us less variable, that is, to make us more alike." The reasons given include (1) unequal stimulation of the dull and bright, (2) lack of perfect correlation between intelligence and scholastic ability, (3) repetition of school grades by duller pupils, and (4) retardation of the brighter ones. Further evidence, though in great disagreement, indicates that individual differences, in the long run, decrease after equal amounts of practice. The type of function and type of skills investigated indicate varied amounts of increase and decrease. "The broader education is, the more it equalizes; the narrower it is, the more it emphasizes individual differences."—*R. A. Brotemarkle* (Pennsylvania).

3701. **Courtis, S. A. The measurement of the effect of teaching.** *School & Soc.*, 1928, **28**, 52–56.—The author claims that the differences between the scores made by a group of students in a given examination before and after a period of teaching are not the result of tuition alone but of many factors, prominent among which is the natural growth rate of the individuals in the

group. Suggestions are given for the use of the Gompertz formula in the measurement of the effects of instruction. That progress pattern which is a resultant of the natural developmental rate of an organism stimulated by a constant environment can be expressed by means of this formula and contrasted with the pattern which occurs under specific instruction.—*H. L. Koch* (Texas).

3702. **Crosse, T. Literature and character. The place of good literature in character building.** *Welfare Mag.*, 1928, **19**, 925–931.—*L. Ackerson* (Institute for Juvenile Research).

3703. **Douglass, H. R. Rating the teaching effectiveness of college instructors.** *School & Soc.*, 1928, **28**, 192–197.—The author believes that college administrators ought to be informed in regard to the teaching efficiency of every member of their faculties. He mentions as a method worthy of consideration, when gauging the effectiveness of instruction, the canvassing of student opinion. Guthrie has found college students' judgments of their instructors to be at least highly reliable.—*H. L. Koch* (Texas).

3704. **Ellis, R. S. A method of constructing the scoring test given with time limits to eliminate or weigh the effect of speed.** *School & Soc.*, 1928, **28**, 205–207.—The method consists in giving in series two or more parallel forms of an examination of the new type, each covering the total subject matter upon which the pupil is to be tested. The scores made by the pupil on those parts of the equivalent examinations which he attempts and which cover approximately the same ground are averaged. To this average is added the score on that series of questions on one of the forms the parallel to which in the other forms the pupil has not had time to answer. If credit is to be given for speed, this can be awarded to the degree and in the manner the tester sees fit.—*H. L. Koch* (Texas).

3705. **Fenton, N., & Lehman, H. C. The true-false question and the student's sense of fairness.** *School & Soc.*, 1928, **28**, 115–116.—In order to adjust to the claim that true-false examinations are often unfair because of the frequent ambiguity of the questions and the possession of too much knowledge by some who are being tested, the authors gave their students an opportunity to qualify as many as they pleased of their answers in two true-false quizzes containing 62 and 46 items, respectively. It was discovered that the more intelligent and better informed students qualified their responses most frequently; that these explanatory comments profited the students little, as far as final grades were concerned; and that besides establishing a feeling among the students that the whole examination procedure was just, the method was valuable in helping the instructor to locate poor questions.—*H. L. Koch* (Texas).

3706. **Fleming, E. G. The predictive value of certain tests of emotional stability as applied to college freshmen.** *Arch. Psychol.*, 1928, No. 96. Pp. 61.—Numerous writers have pointed out that the college student has problems concerning morality, religion, sex, etc. The specific question of this research is whether any relation can be established between the scores made on the Woodworth Personal Data Sheet (PD sheet), the Laird Personal Inventory schedule B2 or the Pressey Cross Out Test (X0 test) and the objective behavior of Columbia College freshmen as indicated by records in the dean's office and data from the students. Scores on the Thorndike Intelligence Examination for High School Graduates were also available. The Laird test and the X0 total score do not measure the same things, as the correlation is only $.23 \pm .04$. The PD sheet and the Laird test probably measure the same thing as the latter was based on the former. They were given to different subjects in this research, however, so it is impossible to determine to what extent they measure the same thing. The third making the highest PD scores take less sleep by 3½ hours per week than the third making the lowest PD scores. Members of scholarship clubs and those receiving scholastic honors in high school make higher average X0 total score by 18 points than those not falling within that group. The author believes that

there are other tendencies toward relationships of some significance. The PD sheet shows positive association with studious activities, negative association with social and motor activities and with sleep. The Laird test shows positive association with studious activities and negative association with motor activity and sleep. The X0 total score shows positive associations where it shows any, except with respect to age.—*E. M. Achilles* (Columbia).

3707. **Foran, T. G. The meaning and limitations of scores, norms, and standards in educational measurement.** *Cath. Univ. Amer., Educ. Res. Bull.*, 1928, **3**, No. 2. Pp. 38.—The interpretation of scores, norms and standards without due appreciation of their limitations is the basis of a criticism of lack of reliability measures, so often lacking, and numerous types of scores used. Raw and derived scores are detailed. The derived score is most acceptable because of greater possibility of comparison. Norms are prone to multiply the errors of individual scores. Standards "must be regarded as levels of attainment that are to be surpassed rather than only equalled."—*R. A. Brotemarkle* (Pennsylvania).

3708. **Franklin, E. E. Age of graduation and the Ph.D.** *School & Soc.*, 1928, **28**, 182–184.—The average age at graduation of the Johns Hopkins Ph.D. is 27½ years. The age at which the doctorate is obtained is increasing, there being departmental variations, however. The attainment of sufficient distinction to cause a Ph.D. to be listed in "Who's Who" seems to be, in part, a function of the field in which he specializes, and his age at (the younger graduates are the more successful) as well as the number of years elapsing since his graduation.—*H. L. Koch* (Texas).

3709. **Good, C. V. How to do research in education: a handbook for the graduate student, research worker, and public-school investigator.** Baltimore: Warwick and York, Inc., 1928. Pp. 298. $2.60.—Recognizing the need for working materials that can be placed in the hands of a graduate student who when he "begins his graduate work is almost wholly innocent of any knowledge of the techniques of research," and believing that there is now enough scattered material on educational research that has been published in widely separated monographs, bulletins, articles, etc., the author here brings together and organizes these contributions for the use not only of the graduate student but also of the senior college student, the research worker and investigator, the seminar group in education or cognate subjects, the public school worker interested in experimentation or investigation and others concerned in any way with the conducting and reporting of research or with the publication of educational writings. The chapter headings include: Value of Educational Research, which orients the student properly at the outset to the work of the true researcher; Sources of Information, which classifies excellently the large number of helpful agencies which the research man has at his disposal; Technical Vocabulary and Terminology, which stresses the need for the development of a uniform educational vocabulary and one as simplified as is compatible with the correct expression of the ideas presented; Characteristics of Scientific Investigations, which enumerates the principal safeguards to be observed in scientific research of any sort; Selecting and Defining a Problem for Investigation; Needed Research in Education, which suggests multitudinous current problems clamoring for solution in the field of education; Techniques of Educational Research, which discusses such methods as the legal, philosophical, historical, comparative and survey, interview, statistical, experimental, case-study, etc., etc.; Tabular and Graphic Presentation, which presents the problems involved in the analysis, organization and summarization of data; Interpretation of Data and Tabulation of Conclusions; Reporting Educational Research and the Preparation of a Manuscript for Publication, which contains a wealth of information for the young author; and Evaluating Educational Writings and Professional Books, which makes valuable suggestions for the development in the student of stand-

ards for judging printed material. The two final chapters are devoted, respectively, to the training of graduate students into scientific research workers and to a statement of progress in recent educational research. A significant feature of the book is the scholarly citation in the foot-notes of hundreds of titles of research material and the illustrative use of this material throughout the chapters. An appendix of selected books, monographs, and bulletins on the conducting and reporting of educational research is included.—*L. A. Averill* (Worcester Normal).

3710. **Hall, R. T. How athletes and non-athletes compare in mental ability and in educational achievement.** *Amer. Phys. Educ. Rev.*, 1928, **33**, 388–389.—The Terman group test of mental ability and the Iowa high school contest examination for achievement were used in ranking 108 high school boys and 76 high school girls. Boy non-athletes rank higher in intelligence than the boy athletes, while the reverse is true of the girls. In achievement in school the boy non-athletes rank higher than the athletes while the girl non-athletes also rank higher than the girl athletes.—*R. Stone* (Clark).

3711. **Hische, W. Berufsberatung, Berufspsychologie, Berufsbetreuung des Hilfsschülers.** (Vocational counselling, vocational psychology, and vocational guidance of the students of the auxiliary school.) Frankfurt a. M.: Diesterweg, 1927. Pp. 102. 3.20 M.—The title is sufficiently indicative of the contents of this very serviceable book. The point of view is founded on modern psychology and on the rich practical experience of the author.—*H. Busemann* (Greifswald).

3712. **Hollingshead, A. D. An evaluation of the use of certain educational and mental measurements for purposes of classification.** *Teach. Coll. Contrib. Educ.* (No. 302), 1928. Pp. x + 63.—Homogeneity of grade placement and of ability grouping within grades was investigated as determined by various measures. Grade placement was tested by mental age on the National Intelligence Test, educational age on the Stanford Achievement Test, and arithmetic age on the Stanford Achievement Test. The relative effectiveness of the following measures for classifying pupils within a grade into X, Y, and Z sections was investigated: intelligent quotient, mental age, educational quotient, educational age, "brightness average" (representing an average of the intelligence and educational quotients), accomplishment quotient, and arithmetic quotient in the evaluation of the arithmetic age. The data were obtained from the records of 425 pupils who in 1923–24 had completed the fifth grade and had been in the sixth grade in 1924–25. With the use of any one of the measures indicated, the others showed enormous heterogeneity or overlapping. The educational age was most effective in both grading and sectioning. For grading in reading it gave an overlap of 10% in 1924 and 18% at the end of the next year's work. The percentages for arithmetic were 24 and 38 respectively. "Homogeneity can only be secured in the measure that is being used for classification." Extreme lack of homogeneity was also observed within pupils with reference to reading and arithmetic, the range in achievement being from 0 to 61 months. It is concluded that dividing into X, Y, and Z sections does not solve the problem of subject differences within the pupils, even though it meet that of individual differences between pupils. Two pupils possessing the same arithmetic age in months may vary as much as two years in achievement in the separate processes of computation and reasoning as measured by the Stanford Achievement Test. A bibliography of 153 titles is appended.—*H. H. Remmers* (Purdue).

3713. **Huber, M. B. The influence of intelligence upon children's reading interests.** *Teach. Coll. Contrib. Educ.* (No. 312), 1928. Pp. x + 39.—430 children in Grades I to V inclusive from the public schools of Yonkers, N. Y., were used in this experiment, in which intelligence was the dominant variable. The material used consisted of six types of literature for children: (1) familiar experience, (2) unusual experience, (3) humor, (4) fancy, (5) information, and

(6) heroism and worship. Quality, representativeness and difficulty of the material were determined by ratings of competent judges. After the experimental subjects had been divided into three ability groups—dull, average, and bright—five selections under each of the types of literature were read to the children, pair-wise, they being instructed to indicate on a signed sheet of paper the preferred selection. The possible effect of position of the selections was controlled. Percentage differences for these preferences for the six types of literature showed that the only certain difference occurred with Type (1), for which dull children showed a decided preference. Marked preferences, indicating real discrimination, was shown. These were, however, very similar for all children with the exception noted. Dull children liked the selections of humor less than did the average and bright. Other less certain conclusions are: (1) "The choices of the dull are more influenced by the complexity of the material, and the average less so; while the bright are little concerned with complexity, within the limits of the material here used." (2) Appreciation of literary quality is positively correlated with intelligence. (3) Content influenced most the choices of the dull, less so those of the average, and least those of the bright subjects. Applications to a practical education program are made. The second chapter gives a summary of literature bearing on this investigation.—*H. H. Remmers* (Purdue).

3714. **Hudelson, E. Class size at the college level.** Minneapolis: Univ. Minnesota Press, 1928. Pp. xxii + 299. $3.00.—A series of carefully organized and controlled experiments, for the purpose of discovering the facts relative to the influence of class size upon the efficiency of instruction. The book first presents a survey of all investigations bearing upon this point, then gives consideration to the opinions of students and faculty, these having been sought by the questionnaire method. Such opinions were predominantly in favor of the small class. The experimental work was carried on in several of the colleges, some 6000 students in 104 classes being involved. Students were paired in large and small sections, and comparisons made of accomplishment largely in terms of objective tests. In 78 % of the experiments the advantage favored the students in the large sections.—*F. C. Paschal* (Vanderbilt).

3715. **Irmina, Sister M. The effects of summer vacation upon the retention of elementary school subjects.** *Cath. Univ. Amer., Educ. Res. Bull.*, 1928, 3, Nos. 3–4. Pp. 99.—A summary of the former studies shows "that classes as a whole are not seriously handicapped in any subject on account of vacation effects." An intensive study is reported in detail. Specific problems are noted in reading ability, arithmetic and spelling. Little or no loss is to be observed over the vacation period. The loss noted is due to specific individual case problems. The review period in the opening days of school is not necessary; on the whole "new and interesting" material is indicated.—*R. A. Brotemarkle* (Pennsylvania).

3716. **Irwin, E. We watch them grow.** *Survey*, 1928, **60**, 273–276.—The experimental classes of Public School 61, Manhattan, are described. During the first year and a half no academic work is given, the children engaging in various recreational activities, and an attitude of co-operation is developed. The regular academic work is disposed of, beginning with Grade 2B, in one and one-half hours daily, and the recreational activities are continued. A comparison (by means of the Stanford Achievement Tests) of the results of this educational method with those of traditionally organized classes indicated that, of three groups, the gifted measured one grade ahead of its control group, while the normal and dull groups were equal to their control groups in scholastic standing.—*D. Grauer* (Chicago, Ill.).

3717. **Keal, H. M. Mental ratings, scholarship and health.** *School & Soc.*, 1928, **28**, 277–280.—107 unselected 9B students were given a battery of mathematics, cancellation, visual imagination, and general-ability tests. Predictions were made on the basis of these in regard to the success and duration of the

school life of the pupils. It was discovered, after following the pupils for 4 years, that the predictions in many cases were in error. Many failed for whom success was expected, although, as a general thing, those ranking highest on the tests remained in school. Of those low students who not only continued in school for 4 years but did honors work, all had been relieved of physical handicaps by proper corrective treatment. All of the failing pupils with normal mental rating, moreover, were suffering from physical defects. The author concludes that physical condition is one of the most powerful factors in school success.—*H. L. Koch* (Texas).

3718. **Kirkpatrick, J. E. In Danish shoes.** *Survey*, 1928, **60**, 277–279.—A description of an experiment in adult education at the Ashland Folk High School in Michigan. Instead of traditional school subjects, "life interests" such as problems of marriage, vocation, the use of leisure, community relationships, and religion will be considered. Specialists in the various sciences will be present, but they will be interested in discovering the meaning of their science in human terms.—*D. Grauer* (Chicago, Ill.).

3719. **Markham, W. T. English vocabulary tests for high school and college students.** Bloomington, Ill.: Pub. School Publ. Co., 1928.—There are two forms of this test, each one comprising 120 5-element multiple choice tests. No time limit. Temporary medians based upon 1,052 cases are given for Grades 9 to 12 inclusive for both forms. Reliability as measured by r between Forms I and II is 0.88.—*L. M. Harden* (Clark).

3720. **McMindes, M. Achievement test in plane geometry.** Bloomington, Ill.: Pub. School Publ. Co., 1928.—Two forms of the test are presented together with a manual of directions, class record sheet and answer keys. Each test form consists of three divisions, true-false, multiple choice, and problems. Norms are based upon 1,083 cases (from large and small high schools, rural and urban, from a number of states). The reliability coefficient is $0.77 \pm .008$ (based on 935 cases). A percentile graph shows the median, upper and lower quartiles, and the percentile rank throughout. The test takes 60 minutes, which may be divided into time intervals as follows: Part I, 20 minutes, Part II, 10 minutes, and Part III, 30 minutes. The true-false section is scored on the right minus wrong principle.—*L. M. Harden* (Clark).

3721. **Messenger, J. F. Educating efficient underlings.** *School & Soc.*, 1928, **28**, 335–336.—Each faculty member of the University of Idaho was requested to list the outstanding characteristics of his three best students. It was discovered that the traits considered most valuable in scholars, as revealed by the above data, did not correspond well with those traits which school principals and business men think are most essential to success in their respective fields. It is suggested that schools might profitably give character education more attention and erudition less.—*H. L. Koch* (Texas).

3722. **Mosher, R. M. The intelligence and achievement of normal school students.** *J. Appl. Psychol.*, 1928, **12**, 335–342.—Entering students at the New Haven State Normal School were given the Thorndike Intelligence Test. The scores were correlated with composite scores on survey tests in subject matter of the elementary school curriculum, the result being a coefficient of 0.53 ± 0.045. Later in the year the correlation betwen the Thorndike Intelligence Test and ranking in the class (honor points) was computed and found to be 0.175 ± 0.05. There is included in the study a brief review of the literature on the subject.—*M. Goodrie* (Clark).

3723. **Nairn, J. A. The influence of the public schools on character.** *Ethol. J.*, 1928, **13**, 38–39.—*F. M. Teagarden* (Pittsburgh).

3724. **Odell, C. W. A glossary of three hundred terms used in educational measurement and research.** (*Univ. Ill. Bull.*, No. 40.) Urbana, Ill.: Univ. Ill., 1928. Pp. 68. $0.50.—This is a revision and enlargement of Circular 13, of the Bureau of Educational Research, which bore the title, "Definitions of the

Terminology of Educational Measurements." It is an explanation of the technical meanings of the words or phrases commonly used in educational research.—*R. Stone* (Clark).

3725. **Orleans, J. S. Public school achievement tests.** Bloomington, Ill., Pub. School Publ. Co., 1928.—This series of tests was devised for use in the Fifth Annual Nation-Wide Testing Survey. The complete set includes the Teachers' Handbook and the following tests, each accompanied by an answer key and individual and class record sheets: Battery A (grades 3–8) (a) reading, (b) arithmetic computation, (c) arithmetic reasoning, (d) language usage, (e) spelling; Battery B (grades 6–8) (f) grammar, (g) history, (h) geography; and Battery C (grades 4–8) (i) nature study, and (j) health. Validity coefficients have not been computed, but the general requirement has been taken care of by making the tests long and by obtaining the questions chiefly from two sources: (1) questions constructed by teachers in making objective tests for use as final examinations for local school systems, and (2) the more recent and better text books in elementary school subjects. Reliability coefficients have likewise not yet been computed. However, the norms indicate in general a marked difference between grade averages, which is one requirement of reliability. Careful scoring instructions are given. To obtain as complete information as possible concerning the achievement of pupils, the plan is to give tests covering a range of several grades, all grades to be scored on the same basis. Grade standards rather than age standards are used. On the front of each test booklet is printed an Individual Survey Chart, which graphically portrays the grade standing of the pupil in each subject. Suggestions for using the test results are given.—*L. M. Harden* (Clark).

3726. **Orton, S. T. An impediment to learning to read.** *School & Soc.*, 1928, **28**, 286–290.—Children normal in intellect, sensory capacity, and motivation who still have difficulty in learning to read the author believes form a homogeneous group, in which those with severe word-blindness are at one extreme. He advances the hypothesis that the retardation in reading results from a "failure to establish the normal physiological habit of using exclusively the engrams of one hemisphere." If those of the two hemispheres are used, there will be confusion in orientation, for since the engrams of the two hemispheres are probably antitropes, there will be a "tendency toward an alternate sinistrad and dextrad direction in reading and toward a lack of prompt recognition of the differences between pairs of words" in which the forward spelling of one and the backward spelling of the other are same—word pairs such as *was* and *saw*. The evidence indicates that proper training begun early will readily dissipate the disability.—*H. L. Koch* (Texas).

3727. **Pierson, C. D., & Nettels, C. H. A study of high-school seniors to determine who shall be recommended to college.** *School & Soc.*, 1928, **28**, 215–216.—For the purpose suggested in the title the following data were obtained for 50 students; high-school grades in the academic subjects, score on the Terman Group Test of Mental Ability, ratings on 10 character traits by several teachers, and college freshman grades. The coefficients of correlation between college grades and high-school scholarship, mental test scores, and character ratings were found to be .523, .429, and .326, respectively; while the multiple correlation coefficient between college scholarship and the other 3 variables was .650. It is concluded that a prognosis considerably better than that arrived at by a mere guess can be hazarded on the basis of the data described.—*H. L. Koch* (Texas).

3728. **Revel, D. Cheiron's cave: the school of the future.** London: Heinemann Ltd., 1928. Pp. ix + 222. 7/6.—All human beings are, following Jung, classed as extrovert or introvert and are said to live upon four "planes": (1) sensational, (2) emotional, (3) intuitional and (4) intellectual. Thus there are eight human types. An account is given of recent educational movements whose aim is freedom with a minimum of external control. The recapitulatory theory

of education is accepted and a brief chapter follows on the notion of libido. The necessity of education to enable a child "to extrovert and introvert on all planes" is next argued, and the danger of parents' attachments emphasized. A series of six chapters then describes in detail the methods adopted in the most modern "free" school in order to attain the assigned end of education at the various age-stages of human development.—*F. C. Bartlett* (Cambridge, England).

3729. **Ruble, V. W. A psychological study of athletes.** *Amer. Phys. Educ. Rev.*, 1928, **33**, 219–234.—Part I deals with the relation between intelligence and success in athletics. Numeral men who have earned letters, and those who have earned numerals in two or more sports, may be taken to be the most successful in athletics; and since these groups rate well above the median percentile for all freshmen and new students at Indiana University, as well as the median for 6500 students from 34 Liberal Arts colleges, it is concluded that there is a very close relationship between intelligence and success in athletics. Part II deals with the relation between academic success and success in athletics. Since the academic average for letter men is superior to the average for all men students, it is concluded that there is a close relationship between scholarship and success in athletics. It is also noted that it takes more intelligence to compete in individual sports than it does in team sports.—*R. Stone* (Clark).

3730. **Sandiford, P. Educational psychology: an objective study.** New York: Longmans, Green, 1928. Pp. xix + 406. $3.50.—The author has attempted to confine his statements to "objective and verifiable data of carefully controlled observations and experiments." The field of educational psychology in general includes these main subdivisions: (1) the original nature of man, (2) the psychology of learning, (3) psychology of special subjects, (4) child study, and (5) educational statistics. Sandiford deals primarily with the first three of these divisions in this volume. Under *Man's Equipment for Learning* (Part I of the book) he treats the general subject of inheritance of human traits, the behavior or organisms, how the body works, reflexes and instincts, emotions, and the nature and measurements of intelligence. Part II deals with the problems of the learning process: conditioning, the laws of learning, improvement in learning, remembering and forgetting, fatigue in learning, transfer of training, and the measurement of improvement. In this part of the book the author also takes up the problem of improvement in special subjects: the acquirement of language habits, reading, spelling, handwriting, and arithmetic. In Appendix A is presented a list of bibliographical material; Appendix B gives a description of a graphical method of estimating r for small groups, a method "admittedly of quite restricted use in the classroom," but the merits of which "as a teaching device are such as to warrant a description." References are listed at the end of each chapter.—*L. M. Harden* (Clark).

3731. **Spence, R. B. The improvement of college marking systems.** *School & Soc.*, 1928, **28**, 224–227.—The author suggests, if our college marking system is to be improved, that the following will be necessary: (1) a controlled study of the assumptions underlying procedures and of the results of these procedures; (2) the observance of the distinction between ranking and assigning weight; (3) the development of a usable marking form; and (4) the reduction of the gap between pass and fail.—*H. L. Koch* (Texas).

3732. **Stalnaker, J. M., & Remmers, H. H. The large college vs. the small.** *School & Soc.*, 1928, **28**, 302–304.—Of the 1240 scientists selected by their fellow scientists as the most outstanding in their fields (the data are taken from Cattell's *American Men of Science*) 35 are, when only the bachelor's degree is considered, graduates of small, 208 of medium-sized, and 997 of large colleges. The percentages of small-, medium-, and large-school graduates attaining the distinction described above are, respectively, .04, .44, and 1.16. The differences, then, in favor of the large school are great and statistically significant. A random sampling, to the extent of 1021 individuals, of those listed in "Who's Who"

reveals, likewise, the large school as the most frequent source of our leaders. The small college seems to excel in producing the leaders among the clergy.—*H. L. Koch* (Texas).

3733. **Starbuck, E. D., Shuttleworth, F. K., & others. A guide to literature for character training. Vol. I. Fairy tale, myth, and legend.** New York: Macmillan, 1928. Pp. xiii + 389. $2.00.—A partial report of a study of children's literature which is being carried on at Iowa University Institute of Character Research. The authors list in this volume 466 selected fairy tales, animal stories, myths, and legends. Presumably other volumes will follow which will recommend reading in other fields: poetry, drama, nature study, science and history. The book is intended for the parent or teacher who wishes a guide to stories of particular fitness in training character. The authors have gathered together many of the "old reliables": *Little Black Sambo, Water Babies,* Anderson's *Fairy Tales,* and other traditional narratives, but they have mixed with these a considerable number of modern stories and tales which had not previously found a place on standard book lists. Literary quality, educational value, and moral purpose were the three criteria for choice. The stories are grouped into two lists: a book list and a situations list. The first ranks the titles according to merit and groups them according to school grade. The second gives the same titles under the headings of thirty-two different moral situations. Thus we find *The Ugly Duckling* listed under "Adversity" and characterized as teaching patience. *The Little Red Hen* finds her place under "Difficulty" and is said to teach resourcefulness. The annotations and indexes are carefully compiled, affording a ready reference to titles, authors and attitudes. This last is a unique index which enables a parent to select stories teaching any mental attitude desired.—*M. Lima* (St. Paul, Minn.).

3734. **Taylor, H. R., & Powers, F. F. Bible study and character.** *J. Genet. Psychol.,* 1928, **35,** 294–302.—The Laycock Test of Biblical Information, Otis and Terman group tests, and information on Sunday school attendance, were statistically compared with character ratings of students in a high school and a private school. Character ratings were found to be hardly at all correlated with intelligence under the prevailing disciplinary conditions, to be positively and negatively correlated with biblical information at the two schools respectively, but to be positively correlated with Sunday school attendance.—*J. F. Dashiell* (North Carolina).

3735. **Thornhill, R. E., & Landis, C. Extra-curricular activity and success.** *School & Soc.,* 1928, **28,** 117–120.—Individuals graduating from Wesleyan University in the years from 1870 to 1918 and attaining sufficient distinction to be listed in "Who's Who" are the subjects of study. Compared with the average male student of 1900 and 1910 the "Who's Who" group excelled in scholarship, were more active in journalistic and dramatic affairs, were less active in athletics and campus politics, and on the whole were slightly less heavily loaded with extra-curricular responsibilities. It is to be noted that the distinguished men of different professional groups showed a different emphasis in their extra-curricular activities, preachers being conspicuous in campus politics, journalists in journalism, lawyers in athletics, etc. The executive group had the highest scholarship.—*H. L. Koch* (Texas).

3736. **Tonks, H. H. Psychological foundations of teaching.** New York: Globe Book, 1927. Pp. 224. $1.67.—*W. S. Hunter* (Clark).

3737. **Tuttle, H. S. What materials build character.** *School & Soc.,* 1928, **28,** 300–302.—The relative effectiveness in establishing ethical conduct of Bible study, worship, practical projects in Christian service, and ethical instruction was experimentally investigated. Direct ethical training had by far the greatest effect upon immediate honesty. None of the evidence gathered, moreover, showed any advantage in character growth, as revealed in religious ideas, attitudes or conduct, among those trained in Bible study as compared with those trained

with the other three types of exercise. It is suggested that in the week-day schools of religion the biblical material which is the source of so much intersectarian friction and of so little pedagogical value be omitted from the curriculum.—*H. L. Koch* (Texas).

[See also abstracts 3401, 3484, 3488, 3495, 3519, 3543, 3550, 3623, 3652, 3654, 3691, 3747, 3751, 3754, 3755.]

BIOMETRY AND STATISTICS

3738. **Thompson, J. R. Boundary conditions for correlation coefficients between three and four variables.** *Brit. J. Psychol.*, 1928, **19**, 77–94.—This paper extends previous work on the boundary conditions for three variables. Further boundary conditions have been found for four variables (1) in which a general factor is unnecessary, (2) in which all factors higher than group factors of the first order are unnecessary. All three boundary conditions have been found to apply when the "all or none" conditions have been discarded, and in this more general study the limitations necessary to reach the boundary conditions when the more general factors are absent have been stated. If higher order factors are not to be used, these boundary conditions can be reached only if (1) the elements are "all or none," or if (2) they obey the law of like proportional patterns.—*H. Banister* (Cambridge, England).

3739. **Thurstone, L. L. The phi-gamma hypothesis.** *J. Exper. Psychol.*, 1928, **11**, 293–305.—The author holds that the phi-gamma hypothesis is theoretically unsound in that it demands a constant limen for all stimulus magnitudes, and that although it may yield, in some cases, a good approximate fit for the psychometric curve "it should be thought of not as a psychophysical hypothesis but rather as any other empirical equation which is used to draw a smooth curve through a set of experimental observations." For two-category judgments the psychometric curve is positively skewed if the absolute limen increases with the stimulus, the amount of skew depending upon the coarseness of the perceptual proces. "The phi-gamma hypothesis is denied if the absolute limen increases with the stimulus magnitude even if Weber's law is not exactly verified." Approximation of fit increases, theoretically, as Weber's ratio becomes smaller.—*S. Renshaw* (Ohio State).

MENTAL TESTS

3740. **Allport, G. W. A test for ascendance-submission.** *J. Abn. & Soc. Psychol.*, 1928, **23**, 118–136.—On the practical side, a test has been made available which possesses fair reliability and some validity. It is thought that the instrument offered will prove of service in certain forms of personnel work, particularly within colleges. On the theoretical side, this study has aimed to clarify the concept of trait, and to contribute evidence to establish at least two of the important personality traits, ascendance and submission. These traits have been found to be fairly constant characteristics of behavior, and to be measurable with a device which employs verbally presented situations. The diagnostic significance of various responses to these situations has been statistically determined in relation to a criterion constructed from ratings. Whatever the ultimate worth of the test may be, the chief aim of the present research is to make a methodological contribution to the objective study of personality.—*C. H. Johnson* (Boston Psychopathic Hospital).

3741. **Allport, G. W., & Allport, F. H. The A-S Reaction Study: a scale for measuring ascendance-submission in personality.** Boston: Houghton Mif-

din, 1928.—The set comprises a "Manual of Directions, Scoring Values, and Norms" and two forms of the test, the Form for Men and the Form for Women. (For discussion of construction of test, method of deriving score values, and theory the reader is referred to *J. Abn. & Soc. Psychol*, 1928, **13**, No. 2.) The test may be given individually or to a group; a half hour is usually sufficient time for administering the test, although there is no time limit. Tentative norms are based upon 727 cases for the Form for Men and 120 cases for the Form for Women, all from the three upper college classes. Approximate reliability for the Form for Men is 0.74, for the Form for Women, 0.78. Validity as measured by the r between ratings and scores ranges from 0.29 to 0.79. Results should be viewed as suggestive rather than conclusive. Possible values lie in giving an individual a better understanding of himself, in guiding suggestions for choice of vocation and vocational placement, as well as being interesting and serviceable for general class room and research uses.—*L. M. Harden* (Clark).

3742. **Baker, H. J. Detroit Advanced First-Grade Intelligence Test.** Yonkers-on-Hudson: World Book, 1928. Packages of 25 with complete instructions $1.10.—A pictorial test designed for use with pupils too far advanced for the Detroit (Beginning) First Grade Intelligence Test, and for those for whom the Detroit test used above the first grade proves too difficult. Seven tests are included, requiring thirty to thirty-five minutes for administration. The standardization is based on the results obtained from 50 children. The reliability coefficient is 0.943 ± 0.005, based upon retest scores of 158 unselected pupils (interval between tests was two weeks). r between letter ratings for this group on the two tests was 0.902 ± 0.011. r between Stanford-Binet metal age and score on this test for 46 unselected children was 0.848 ± 0.027; and for 227 children tested because of mental retardation this r was 0.573 ± 0.031. A table is given from which letter ratings may be determined (based upon 2975 cases), also one by which approximate M. A. equivalents may be ascertained.—*L. M. Harden* (Clark).

3743. **Carter, H. D. The organization of mechanical intelligence.** *J. Genet. Psychol.*, 1928, **35**, 270–285.—Is the Spearman two-factor theory of mental organization applicable to the field of mechanical abilities? A table of intercorrelations between 15 mechanical abilities tests—as developed at the University of Minnesota—yielded an average intercolumnar correlation of .15; and a similar table of 17 tests yielded .30. In both cases the intercolumnar correlations ranged from high positive to high negative, and when two tests were excessively related one was eliminated. Then a table of 8 tests selected from the 17, containing no negative correlations and satisfying Spearman's criterion as to the elimination of columns, gave a mean intercolumnar correlation of .41. Spearman's method of tetrad-differences was then applied to this table in whole and in sections; with results leading to the conclusion that no general factor is evident but only quasi-general factors running through groups of four or five tests only—which is in accord with Thomson's theory.—*J. F. Dashiell* (North Carolina).

3744. **Drever, J., & Collins, M. Performance tests of intelligence.** Edinburgh: Oliver & Boyd, 1928. Pp. 52. 5s.—Selected non-linguistic tests especially suitable for use among deaf children are described. Details are given as to the mode in which they should be applied, and tentative norms, both for the deaf and for normal children, are supplied.—*F. C. Bartlett* (Cambridge, England).

3745. **Greene, E. B. A graphic summary of the Stanford-Binet test.** *J. Appl. Psychol.*, 1928, **12**, 343–347.—A brief description is given of the graphic summary form of the Stanford-Binet test. Its advantages are: it makes possible a quick analysis of the findings; it yields statistical results rapidly; it is a saver of time and money; it enables the tester to follow a logical order in presenting the test; when well administered, it is the only permanent record neces-

sary. It shows the need of supplementary test material in connection with the Stanford-Binet Test.—*M. Goodrie* (Clark).

3746. **Heinlein, C. P. A brief discussion of the nature and functions of melodic configuration in tonal memory, with critical reference to the Seashore tonal memory test.** *J. Genet. Psychol.*, 1928, **35**, 45–61.—This test is found to be inadequate on theoretical grounds: different melodic series containing the same number of notes are not necessarily of equal difficulty, owing to such disturbing factors as pitch direction, rhythmic grouping, and tonality; a musical subject is more likely to attend to a melodic series as a whole configuration than to attend to the specific tones as demanded by the test; an identification test is improperly named when called a test of memory span. Actual use of the test upon two groups yielded findings confirmatory of the direction of these criticisms: the test was found not to consist of graded steps.—*J. F. Dashiell* (North Carolina).

3747. **Hill, H. C., & Wilson, H. E. A test in civic action.** Bloomington, Ill.: Pub. School Publ. Co., 1928.—One test form, directions and answer keys comprise the set. A series of 20 multiple choice problems representing actual experience form the test. There is no time limit. Tentative norms have been worked out for boys and girls for Grades 6 to 12 inclusive, based on over 1200 scores.—*L. M. Harden* (Clark).

3748. **Hubbard, R. M. A measurement of mechanical interests.** *J. Genet. Psychol.*, 1928, **35**, 229–254.—A modification of Freyd's list of occupations was furnished to junior high school students, the examinee to mark each item according as he likes it, dislikes it, is indifferent to it, or knows nothing of it. Those items chosen most frequently by individuals who had made high scores in a standardized practical shop test were then considered indicators of mechanical interests, and by use of a modified correlation, 63 items and their four possible answers were evaluated. Results from 100 students on this test showed high inner statistical consistency. However, these interest scores correlated poorly with those on formal mechanical tests of proved validity when applied to students in several high schools, and it is concluded that these mechanical interests cannot be depended upon to predict scores in mechanical tests. Extremely low correlations were obtained also with tests of general intelligence, results of a socio-economic questionnaire to study the cultural background, gymnastic measurements, etc. The value of interest scores is found in vocational guidance when taken in conjuncton with ability tests.—*J. F. Dashiell* (North Carolina).

3749. **Hull, C. L. Aptitude testing.** Yonkers-on-Hudson: World Book, 1928. Pp. xiv + 535. $2.68.—This book is designed as a text for college and university classes in aptitude testing and as a general handbook for those engaged in aptitude work of all kinds. Part I deals with principles of aptitude testing, while Part II describes the most effective and economical methods of constructing batteries of aptitude tests. The author first discusses aptitude differences, varieties of tests, and anatomical and other alleged signs of aptitude. He then takes up the derivation of the aptitude prognosis from raw test results, giving three methods of converting test scores into aptitude equivalents, (1) by tables showing corresponding test and aptitude scores, (2) by line charts or nomographs, and (3) by multiple-regression equation. The latter is shown to be the superior method. As to the nature and constitution of aptitude and test behavior, Hull adopts a strict group factor theory. This view forms the basis of the exposition of the relations among aptitudes and tests, where he shows how common aptitude determiners produce correlations and explains the effect of the chance factor in determining the size or r, the nature and problem of attenuation, how true relations may be deduced from fallible data, the determination of the true validity of a test battery, etc. The limitations of the partial correlation technique in cases where the variable which is held constant is dependent upon a number of independent determiners are pointed out. As to the

composition of a test battery, two principles should be followed: (1) The tests should each correlate as highly with the aptitude criterion as possible. (2) They should correlate as low with each other as possible. The problems of length of the battery, added tests, diminishing returns, forecasting efficiency, etc., are discussed in the chapter on the composition and yield of test batteries. In Part II the following chapter headings indicate the topic treated: *The Psychological Analysis of Occupational Behavior, The Assembling of a Trial Battery of Tests, Administering the Preliminary Test Battery to a Trial Group of Subjects, The Determination of the Actual Aptitudes of the Trial Subjects, Selecting the Final Aptitude Battery,* and *Combining the Tests to Secure the Maximum Forecasting Efficiency.* The appendix includes (1) a table for converting ranks into linear scores, (2) table of $1 - r^2$ and $\sqrt{1 - r^2}$, (3) table of squares and square roots to 1000, and (4) multiplication table to 100×100. A bibliography of 105 titles and an author and subject index conclude the volume.—*L. M. Harden* (Clark).

3750. **Hunt, T. The measurement of social intelligence.** *J. Appl. Psychol.*, 1928, **12**, 317–334.—A report of a study of the George Washington University Social Intelligence Test as a measure of "social intelligence defined as ability to deal with people." The test is described in detail, the parts analyzed, the reliability and validity determined. The scores are found to correlate about 0.50 with abstract intelligence scores for college students; 0.22 with mechanical intelligence as measured by the O'Rourke Mechanical Aptitude Test and 0.11 as measured by the MacQuarrie Mechanical Ingenuity Test. There seems to be no definite increase in social intelligence with age; there is a sex difference, women testing, on the average, 5 points higher than men. Norms are given for different school levels of ability and for different industrial groups. The correlation between the tests and scholarship for the 3 groups studied was 0.47, 0.49, and 0.42. It is suggested that the test might be useful in vocational guidance.—*M. Goodrie* (Clark).

3751. **Kwalwasser, J. Tests and measurements in music.** *Psychol. Bull.*, 1928, **25**, 284–301.—The great array of music tests now devised indicates that important changes in music pedagogy lie ahead. The tests include those for aptitudes (sensory, feeling, motor) and those for achievements (knowledge, appreciation, performance). 28 titles are listed.—*J. F. Dashiell* (North Carolina).

3752. **Larson, D. L. An experimental critique of the Seashore Consonance Test.** *Psychol. Monog.*, 1928, **38**, No. 4. *Univ. Iowa Stud. Psychol.*, No. XI.—The Seashore Consonance Test was given to groups of trained, untrained, and selected subjects three times, with an interval of 6 months between the second and third tests. The method of paired comparisons is adequate for testing consonance. The Seashore Consonance Test is reliable when the instructions, particularly those given in the footnote in the published directions, are followed literally. Affective judgments may be eliminated under properly controlled conditions.—*F. A. C. Perrin* (Texas).

3753. **Mackie, J. The probable value of the tetrad difference on the sampling theory.** *Brit. J. Psychol.*, 1928, **19**, 65–76.—A formula for the probable value of the tetrad difference F is obtained on the sampling theory. F is a function whose mean value is zero. If N is large the standard deviation is inversely proportional to the square root of N. If the number of mental factors is at least 100, $F = 0 \pm .034$ as a maximum.—*H. Banister* (Cambridge, England).

3754. **Piéron, H. La critique expérimentale des méthodes d'examen.** (Experimental criticism of examination methods.) *Bull. Soc. fr. de péd.*, 1928, **27**, 20–26.—The author notes the present contrast between the important place which examinations have taken in our society and the minor place given to the technical preparation of these examinations and also to the preparation of the examiners. One ought first to determine the aim of a contemplated examination and to know,

in order to satisfy this aim, whether appeal ought to be made especially to acquired knowledge, to capacities, or to aptitudes. From this determination of the aim will proceed the method of making up the questions. It is necessary, next, to keep in mind the rules of the examination and their administration by the examiners, in whom it is desirable to recognize the element of estimate (on the average 10%, which makes inadmissible the recording in fractions of a point). Another point to recognize is the absurdity of the division between passes and failures when it is placed in the middle region (the high and the low being alone characteristic and the middle sensibly homogeneous). The author reviews the results obtained from a comparison of the work done by students as shown by a certificate of studies (usually primary studies) with the results of tests. After having established (1) total correlations by classes (2) partial correlations with each test, (3) separate correlations in the groups of items mentioned on the certificate (matters having to do with positive acquisition, the functioning of the higher mental processes, application, care and order), he states that these two examinations give information on the different characteristics of children and that the make-up of the good examination student (determined by a good certificate of studies) is somewhat independent of the defined forms of examined intelligence in employed tests and also different from that of the good class pupil. It would be well not to replace examinations by tests, but to make use of both methods before permitting ourselves to eliminate candidates when an attempt is made to practice rational orientation and selection—for example, for entrance into institutions of higher learning.—*Math H. Piéron* (Sorbonne).

3755. **Sister Mary, I. H. M., Gannon, M. A., & Moloney, H. M. An extension of the moral information tests.** *Cath. Univ. Amer., Educ. Res. Bull.*, 1928, **3**, No. 7. Pp. 31.—Four groups of tests are reported for an extension of Tests of Moral Knowledge of Children. The first group involves the discrimination of words and ideas; the second group consists of situation-problems; the third test is the appreciation of character-qualities; the fourth is composed of picture material. The first three groups were presented to 250 children, boys and girls, from fifth through twelfth grades, ages 11 through 18. These tests have been added to the Revised Scale. Group four produced negative results, among children from fifth through eighth grades. Appendix presents the Revised Scale for Testing the Moral Knowledge of Children originally presented by McGrath in *Psychological Monographs*, 1922.—*R. A. Brotemarkle* (Pennsylvania).

3756. **Slocombe, C. S. Three points of interest to mental test constructors.** *Brit. J. Psychol.*, 1928, **19**, 31–33.—(1) The same "type" of intelligence is found to be measured by the selective and inventive forms of tests; (2) the selective form of test is the more accurate measure; (3) for children (11–12) synonyms and narrative completion tests are the best type of sub-test.—*H. Banister* (Cambridge, England).

3757. **Spearman, C. Pearson's contribution to the theory of two factors.** *Brit. J. Psychol.*, 1928, **19**, 95–101.—A reply to criticisms by Karl Pearson together with some criticisms of Pearson.—*H. Banister* (Cambridge, England).

3758. **Stroud, J. B. A study of the relation of intelligence test scores of public school children to the economic status of their parents.** *J. Genet. Psychol.*, 1928, **35**, 105–110.—Economic status, as determined from tax assessments of parents, shows a low positive correlation with intelligent test scores.—*J. F. Dashiell* (North Carolina).

[See also abstracts 3404, 3413, 3414, 3498, 3596, 3612, 3666, 3700, 3704, 3705, 3796, 3719, 3720.]

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WALTER S. HUNTER, CLARK UNIVERSITY

RAYMOND R. WILLOUGHBY (*Assistant Editor*)
CLARK UNIVERSITY

WITH THE COÖPERATION OF

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LIST OF JOURNALS REPRESENTED IN THIS VOLUME

Acta Oto-Laryngol. Acta oto-laryngolica
Acta Psychiat. et Neur. Acta psychiatrica et neurologica
Allattani Közlemények (Quarterly journal of the zoological section of the Royal Hungarian Society of Natural Sciences)
Allg. ärzt. Zsch. f. Psychotherap. u. psych. Hygiene. Allgemeine ärtzliche Zëitschrift für Psychotherapie und psychische Hygiene
Amer. Ann. Deaf. American annals of the deaf
Amer. Anthrop. American anthropologist
Amer. J. Anat. American journal of anatomy
Amer. J. Diseases of Children. American journal of disease of children
Amer. J. Med. Sci. American journal of medical science
Amer. J. Obstet. & Gynecol. American journal of obstetrics and gynecology
Amer. J. Ophth. American journal of ophthalmology
Amer. J. Phys. Anthrop. American journal of physical anthropology
Amer. J. Physiol. American journal of physiology
Amer. J. Psychiat. American journal of psychiatry
Amer. J. Psychol. American journal of psychology
Amer. J. Pub. Health. American journal of public health
Amer. J. Sociol. American journal of sociology
Amer. Mercury. American Mercury
Amer. Phys. Educ. Rev. American physical education review
Amer. Pol. Sci. Rev. American political science review
Anat. Anz. Anatomische Anzeiger
Anat. Rec. Anatomical record
Annale van die Uniwersiteit van Stellenbosch
Ann. de l'enfance. Annales de l'enfance
Ann. méd.-psychol. Annales médico-psychologiques
Ann. d. Phil. Annalen der Philosophie
Annual Report of the Department of Mental Hygiene, State of New York, Albany, for the year ending June 30, 1927
Ann. d. Sci. Nat. Annales des sciences naturelles
Anthrop. Papers Amer. Mus. Nat. Hist. Anthropological papers of the American Museum of Natural History
Anthropos
Arch. di Antrop. Archivi di antropologia criminale, psychiatria, e medicina legale
Arch. f. Anthrop. Archiv für Anthropologie
Arch. f. Augenhk. Archiv für Augenheilkunde
Arch. de Biol. Archives de biologie
Arch. f. Frauenkd. u. Konst. Archiv für Frauenkunde und Konstitutionsforschung
Arch. gen. neur. psichiat. e psicoanal. Archivo generale di neurologia psichiatria e psicoanalisi
Arch. f. d. ges. Psychol. Archiv für die gesamte Psychologie
Arch. internal med. Archives of internal medicine
Arch. ital. psicol. Archivio italiano di psicologia

Arch. der Julius Klaus-Stift. Archiv der Julius Klaus-Stift
Arch. f. Krimin. Archiv für Kriminologie
Arch. de méd. des enfants. Archives de médicine des enfants
Arch. Neur. & Psychiat. Archives of neurology and psychiatry
Arch. f. Ohrenk. Archiv für Ohren-, Nasen,—und Kehlkopfkunde sowie die angrenzenden Gebiete
Arch. f. Ophth. Archiv für Ophthalmologie
Arch. Otolar. Archives of otolaryngology
Arch. f. Phil. u. Soziol. Archiv für Philosophie und Soziologie
Arch. f. Psychiat. u. Nervenkr. Archiv für Psychiatrie und Nervenkrankheiten
Arch. Psychoanal. Archives of psychoanalysis
Arch. Psychol. Archives of psychology
Arch. de Psychol. Archives de psychologie
Arch. f. Rassen- u. Gesellsch.-biol. Archiv für Rassen- und Gesellschaftsbiologie
Arch. f. soz. Hygiene u. Demog. Archiv für sozial Hygiene und Demographie
Arch. zool. exper. Archives de zoologie experimentale
Archivos Brasileiros
Arkiv f. psykol. o. ped. Arkiv för psykologi och pedagogik
Astrophys. J. The astrophysical journal
Atl. Mo. Atlantic Monthly
Austral. J. Exper. Biol. & Med. Sci. Australian journal of experimental biology and medical science
Australasian J. Psychol. & Phil. Australasian journal of psychology and philosophy

Beiheft z. Monatsschr. f. Psychiat. u. Neur. Beiheft zur Monatsschrift für Psychiatrie und Neurologie
Ber. u. d. Kongr. f. exper. Psychol. Berichte über die Kongress für experimentelle Psychologie
Biol. Bull. Biological bulletin of the Marine Biological Laboratory
Biol. Zentbl. Biologisches Zentralblatt
Biometrika
Boll. med. di Bologna. Bolletino medicale di Bologna
Brain
Brit. Asso. Adv. Sci. British association for the advancement of science (Memoirs)
Brit. J. Med. Psychol. British journal of medical psychology
Brit. J. Ophth. British journal of ophthalmology
Brit. J. Psychol. British journal of psychology
Bull. Acad. méd. Bulletin de l'Academie de médicine
Bull. Amer. Math. Soc. Bulletin of the American Mathematical Society
Bull. biol. Fr. et Belg. Bulletin biologique de la France et de la Belgique
Bull. Bureau of Statistics. Bulletin of the Bureau of Statistics
Bull. Div. Educ. Res., Board of Educ. Philadelphia. Bulletin of the division of educational research, board of education, Philadelphia
Bull. Inst. gén. psychol. Bulletin de l'Institut générale psychologique
Bull. et mém. Soc. méd. Bulletins et mémoires de la Societé médicale des hôspitaux de Paris
Bull. mus. Bulletin de muséum
Bull. Purdue Univ.: Stud. Higher Educ. Bulletin of Purdue University: Studies in Higher Education
Bull. Soc. Binet. Bulletin de la Societé Alfred Binet
Bull. Soc. clin. méd. ment. Bulletin de la société de la clinique et de médicine mentale

Bull. Soc. entomol. Bulletin de la Societé entomologique de France
Bull. Soc. fr. de péd. Bulletin de la Société française de pédagogie
Bull. Soc. méd. ment. Bulletin de la Société de médicine mentale
Bull. de la Soc. d'Ophth. Bulletin de la Société d'Ophthalmologie
Bull. de la Soc. d'Ophth. de l'est de la France. Bulletin de la Société d'Ophthalmologie de l'est de la France

Can. Med. Asso. Canadian Medical Association (Journal)
Carnegie Institute Publ.: Contrib. to Embryol. Carnegie Institute publications, Contributions to embryology
C. r. Cong. soc. savantes. Comptes rendus du congrés des sociétés savantes en 1926
C. r. Soc. biol. Comptes rendus hebdomadaire des séances et mémoires de la Société de biologie et de ses filiales, etc.
Cath. Univ. Amer., Educ. Res. Bull. Catholic University of America, Educational Research Bulletin
Century. Century magazine
Child Welfare Monog. Series. Child welfare monograph series (Minnesota)
Child Stud. Child Study
China Institute in America, Bulletin no. 4
Chinese J. Psychol. Chinese journal of psychology
Chinese Student's Quar. Chinese student's quarterly
Christliche Freiheit
Christliche Welt. Die Christliche Welt
Christ. u. Wiss. Christentum und Wissenschaft
Chugai Iji Shimpo. (Home and foreign lands)
Clin Ophth. La clinique ophthalmologique
Comp. Psychol. Monog. Comparative psychology monographs
Criterion

Didaskalia
Divus Thomas
Dtsch. Mädchenbildung. Deutsche Mädchenbildung
Dtsch. Zsch. f. Nervenhk. Deutsche Zeitschrift für Nervenheilkunde

Edinburgh Review
Educ. naz. L'educazione nazionale
Educ. Res. Bull. Educational research bulletin
(Chinese) Educ. Rev. (Chinese) Educational review
Elem. School. J. Elementary school journal
Encèph. L'encèphale
Erbe Luthers (Ihmels-Festschrift)
Ethol. J. Ethological journal
Eug. Rev. Eugenics review
Evangelische Deutschland

Family
Feuilles d. natur. Feuilles des naturalistes
43 Jahrb. d. Gefangnisgesellschaft f. d. Provinz Sachsen u. Anhalt. 43 Jahrbuch der Gefangnisgesellschaft für die Provinz Sachsen und Anhalt
Forum Educ. Forum of education

Gakko Eisei. (School hygiene)
Gamma Alpha Record
Genetic Psychol. Monog. Genetic psychology monographs

Genetics
Graefes Arch. f. Ophth. Graefes Archiv für Ophthalmologie
Gregg Educ. Monog. Gregg educational monographs
Grenzfr. d. Phil. Grenzfragen der Philosophie
Grenzfr. d. Nerv.- u. Seelenlebens. Grenzfragen des Nerven- und Seelenlebens
Grundwiss. Phil. Zsch. d. Johannes-Rehmke-Gesellschaft. Grundwissenschaft Philosophie, Zeitschrift der Johannes-Rehmke-Gesellschaft
Gyógyászat
Harper's. Harper's magazine
Harvard Graduate Magazine
Harvard Stud. Educ. Harvard studies in education
Heimatbildung
Hibb. J. The Hibbert journal
(Die) Hilfsschule
Hospital Progress
Hygiène mentale
Imago. Imago: Zeitschrift für psychoanalyse auf die Geisteswissenschaften
Indian J. Psychol. The Indian journal of psychology
Indus. Psychoteck. Industrielle Psychotecknik
Int. J. Eth. International journal of ethics
Int. J. Psychoanal. International journal of psychoanalysis
Int. Zsch. f. Indiv.-psychol. Internationale Zeitschrift für Individual-psychologie
Int. Zsch. f. Psychoanal. Internationale Zeitschrift für Psychoanalyse

J. Abn. & Soc. Psychol. Journal of abnormal and social psychology
J. Amer. Folk-lore. Journal of American folk-lore
J. Amer. Med. Asso. Journal of the American medical association
J. Amer. Statis. Asso. Journal of the American statistical association
J. Appl. Psychol. Journal of applied psychology
J. Comp. Neur. Journal of comparative neurology
J. Comp. Psychol. Journal of comparative psychology (Continuing Psychobiology and Journal of animal behavior)
J. Crim. Law & Crimin. Journal of the American institute of criminal law and criminology
J. Delinq. Journal of delinquency
J. Educ. Psychol. Journal of educational psychology
J. Educ. Res. Journal of educational research
J. Exper. Psychol. Journal of experimental psychology
J. Exper. Zool. Journal of experimental zoology
J. Florida Med. Asso. Journal of the Florida medical association
J. Franklin Inst. Journal of the Franklin Institute
J. Gen. Psychol. Journal of general psychology
J. Genet. Psychol. Pedagogical seminary and journal of genetic psychology
J. Hered. Journal of heredity
J. Mammalogy. Journal of mammalogy
J. Marine Biol. Asso. of the United Kingdom. Journal of the Marine Biological Association of the United Kingdom
J. Méd. de Bordeaux et du Sud-Ouest. Journal de médicine de Bordeaux et de Sud-Ouest
J. Morph. Journal of morphology
J. Nat. Instit. Indus. Psychol. Journal of the National Institute of Industrial Psychology
J. Nerv. & Ment. Dis. Journal of nervous and mental diseases
J. de neur et de psychiat. Journal de neurologie et de psychiatrie

J. Opt. Soc. Amer. Journal of the Optical Society of America, and review of scientific instruments
J. Organotherap. Journal of organotherapy
J. Phil. Journal of philosophy
J. de physiol. Journal de physiologie et de pathologie générale
J. de psychol. Journal de psychologie normale et pathologique
J. f. Psychol. u. Neur. Journal für Psychologie und Neurologie
J. Sci. Instruments. Journal of scientific instruments
J. Soc. Hyg. Journal of social hygiene
J. Textile Instit. Journal of the Textile Institute
Jahrb. d. Charakterol. Jahrbuch der Charakterologie
Jahrb. f. Psychiat. u. Neur. Jahrbücher für Psychiatrie und Neurologie
Jap. J. Psychol. Japanese journal of psychology
Jena. Beitr. z. Jugend- u. Erziehungspsychol. Jenaische Beiträge zur Jugend- und Erziehungspsychologie
Jido Kenkyu-sho Kiyo. (Summary report of the Institute of Child's Study)
Jika Zatshi. (Journal of pediatrics)

Katechetische Blätter.
Klin. Monatsbl. f. Augenhk. Klinische Monatsblätter für Augenheilkunde
Kyoto I-gaku Zatshi. (Kyoto journal of medicine)

Lancet
Laryngoscope

Magyar Gyópedagógia
Man. Man: a monthly record of anthropological science
Mannus: Zsch. f. Vorgesch. Mannus: Zeitschrift für Vorgeschichte
Med. J. & Rec. Medical journal and record
Medicina
Med. J. Australia. Medical journal of Australia
Ment. Hygiene. Mental hygiene
Ment. Meas. Monog. Mental measurements monographs
Ment. Welfare. Mental welfare
Miami Univ. Bull. Miami University bulletin
Monatssch. f. Krimpsychol. u. Strafrechtsref. Monatsschrift für Kriminal-psychologie und Strafrechtsreform
Monatssch. f. Pastoraltheol. Monatsschrift für Pastoraltheologie
Monatssch. f. Volksgesundheitspflege. Monatsschrift für Volksgesundheitspflege
Monog. a. d. Gesamtgeb. d. Neur. u. Psychiat. Monographien aus dem Gesamtgebieten der Neurologie und Psychiatrie
Monist

Nachrichtendienst f. Charakterol. u. prakt. Anwendung. Nachrichtendienst für Charakterologie und praktische Anwendung
Nation
(La) Nature
Nederl. Tijdschr. v. Geneesk. Nederlandische Tijdschrift van Geneeskunde
Neue kirchl. Zsch. Neue Kirchliche Zeitschrift
Neuphilol. Mitteilungen. Neuphilologische Mitteilungen
New. Int. Year Book. New International Year Book, 1926
New Republic
New Scholas. The new scholasticism
News Bull. News bulletin, Institute of Pacific relations

19th Century. Nineteenth century and after
Nippon Gakko Eisei. (Japanese school hygiene)
Nippon Ganka-kakukai Zatshi
Novoe v refleksologii i fiziologii nervoni sistemy. (Reflexological and neurophysiological news)
Nueva Era

Obozrenie psikhiatrii, nevrologii i refleksologii. (Review of psychiatry, neurology and reflexology)
Ohio J. Sci. The Ohio journal of science
(La) Obra
Occup. Therap. & Rehab. Occupational therapy and rehabilitation

Päd Warte. Pädagogische Warte
Päd Zentbl. Pädagogische Zentralblatt
Parent-Teacher
Passow u. Schafer'sche Beitr. Passow und Schaferische Beiträge
Paix par droit
Paris méd. Paris médical
Peabody College for Teachers, Contrib. Educ. Peabody college for teachers, contributions to education
Ped. Sem. (See *J. Genet. Psychol.*)
Person. J. The personnel journal (Continuing Journal of personnel research)
Pflüg. Arch. f. d. ges. Physiol. Pflügers Archiv für die gesamte Physiologie
Phil. u. Leben. Philosophie und Leben
Phil. Mag. Philosophical magazine and journal of science
Phil. Rev. The philosophical review
Philippine Pub. Schools. Philippine public schools
Phys. Rev. The physical review: a journal of experimental and theoretical physics
Physiol. Revs. Physiological reviews
Polskie Arch. Psychol. Polski Archiwum Psychologji
Presse méd. La presse médicale
Proc. Amer. Asso. Stud. Feebleminded. Proceedings of the American association for the study of the feebleminded
Proc. Amer. Phil. Soc. Proceedings of the American philosophical society
Proc. Asso. Res. Nerv. & Ment. Dis. for 1925. Proceedings of the Association for research in nervous and mental disease
Proc. 8th Int. Cong., Groningen. Proceedings of the Eighth international congress, Groningen
Proc. Iowa Acad. Sci. Proceedings of the Iowa academy of science
Proc. Nat. Acad. Sci. Proceedings of the National academy of Sciences of the United States of America
Proc. Phys. Soc. Lond. Proceedings of the Physical society of London.
Proc. 2nd sec. Roy. Hungarian Acad. Sci. Proceedings (second section) of the Royal Hungarian academy of science
Proc. Roy. Soc. Edinburgh. Proceedings of the Royal society of Edinburgh
Proc. Roy. Soc. London. Proceedings of the Royal society of London
Proc. 6th Int. Cong. Phil. Proceedings of the Sixth international congress of philosophy
Proc. Soc. Exper. Biol. & Med. Proceedings of the society for experimental biology and medicine
Prophyl. ment. Prophylaxie mentale
Psyche
Psychiat.-neur Woch. Psychiatrisch-neurologische Wochenschrift

Psychiat. Quar. Psychiatric quarterly
Psychoanal. Rev. Psychoanalytic review
Psychol. Arbeit. Psychologische Arbeiten
Psychol. Clin. Psychological clinic for the normal development of every child
Psychol. Forsch. Psychologische Forschung
Psychol. u. Med. Psychologie und Medizin
Psychol. Monog. Psychological monographs
Psychol. Rev. Psychological review
Psychol. et vie. La psychologie et la vie
Psychotechn. Zsch. Psychotechnische Zeitschrift
Pub. Pers. Stud. Public personnel studies
Pubbl. Univ. Cattol. Milano. Pubblicazioni della Universita Cattolica del Sacra Cuore, Milano
Publ. Amer. Asso. Museums. Publications of the American association of museums
Publ. Carnegie Instit., Wash. Publications of the Carnegie Institute, Washington
Publ. Pa. Instit. Instruc. Blind. Publications of the Pennsylvania institution for the instruction of the blind

Quar. J. Exper. Physiol. Quarterly journal of experimental physiology
Quar. Rev. Biol. Quarterly review of biology

Rel. Educ. Monog. Religious education monographs
Rep. Indus. Fatigue. Res. Board. Report of the industrial fatigue research board
Rep. Proc. 1928 Cambridge Cong., Int. Indus. Relations Asso. Report of the proceedings of the 1928 Cambridge Congress, International Industrial Relations Association
Rev. de Crim. Revista de criminologia
Rev. fr. d'ornithol. Revue française d'ornithologie
Rev. fr. de psychanal. Revue française de psychanalyse
Rev. int. de sociol. Revue internationale de sociologie
Revuo Kultura
Rev. méd. de Suisse. Revue de médicine de la Suisse romande
Rev. metapsych. Revue metapsychique
Rev. neur. Revue neurologique
Rev. oto-neuro-oftal. Revue oto-neuro-oftalmológica y de cirurgía neurológica
Rev. de phil. Revue de philosophie
Rev. phil. Revue philosophique de la France et de l'étranger
Rev. de psychol. appl. Revue de psychologie appliquée
Rev. scient. Revue scientifique
Rinsho
Riv. di psicol. Rivista de psicologia
Riv. pat. nerv. e ment. Rivista di patologia nervosa e mentale
Riv. di sociol. Rivista di sociologia
Riv. sper. fren. Rivista sperimentale di freniatria
Russian Arch Ophth. Russian archives of ophthalmology

Sbornik, posvyashenyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti (Bekhterev commemorative volume)
Schildgenossen
School Music
School & Soc. School and society
Schweiz. Arch. f. Neur. u. Psychiat. Schweizer Archiv für Neurologie und Psychiatrie

Schweiz. med. Woch. Schweizerische medizinische Wochenschrift
Schweiz. Schrift. f. ration Wirtsch. Schweizer Schriften für rationelles Wirtschaften
Science
Scientia
Scient. Mo. The scientific monthly
Shakai-gakukeykyu. (Sociological studies)
Shakai Jigyo Kenkyu. (Studies in social work)
Shinkei Gaku Zatshi. (Journal of nervous disease)
Shinri Kenkyu. (Psychological studies)
Soc. Forces. Social forces.
Soc. Serv. Rev. Social service review
Strassburg méd. Strassburg médicale
Sud. méd. et chirur. Le sud médical et chirurgical
Süddtsch. Blät. f. Kirche u. Frei. Christ.
Sup. Educ. Monog. Supplementary educational monographs
Survey
Svenska läkartidn. Svenska läkartidningen

Teach. Coll. Contrib. Educ. Teachers college contributions to education
Tidsskr. f. d. Norske Laegenforen. Tidsskrift för den Norske Laegeforening
Tokei-jiho. (Statistical bulletin)
Tr. School Bull. Training school bulletin
Trans. Illum. Eng. Soc. Transactions of the Illuminating Engineering Society
Trans. Opt. Soc. Transactions of the optical society of London
27th Yrbk. Nat. Soc. Stud. Educ. Twenty-seventh yearbook of the national society for the study of education

Ukrainski vestnik eksperimentalnoe pedagogiki i refleksologi
Univ. Cal. Publ. Phil. University of California publications in philosophy
Univ. Ill. Bull. University of Illinois bulletin
Univ. Iowa Monog.: Monog. Educ. University of Iowa monographs: Monographs in education
Univ. Iowa Stud.: Stud. Child Welfare. University of Iowa studies: Studies in child welfare
Univ. Iowa Stud.: Series on Aims and Progress of Research. University of Iowa studies, series on aims and progress of research
Univ. Ore. Publ., Phys. Educ. Ser. University of Oregon publications, physical education series
Univ. of Pittsburgh Radio Pub. University of Pittsburgh radio publications
U. S. Children's Bur. Publ. United States Children's Bureau Publications

Verhand. physik.-med. Gesellsch. Würzburg. Verhandlungen physikalische-medizinische Gesellschaft Würzburg
Voc. Guid. Mag. Vocational guidance magazine
(Die) Volksmission
Voprosy izucheniya i vospitaniya lichnosti. (Problems in the study and education of personality)

Welfare Mag. Welfare magazine
Wesleyan Univ. Alumnus. Wesleyan University alumnus
Woman's Home Companion
Würtemburgische Schulwarte

Zentbl. f. Gewerbehygiene u. Unfallverhütung. Zentralblatt für Gewerbehygiene und Unfallverhütung
Zentbl. f. Okkult. Zentralblatt für Okkultismus
Zsch. f. Aesth. u. allg. Kunstwiss. Zeitschrift für Aesthetik und allgemeine Kunstwissenschaft
Zsch. f. Aszese u. Mystik. Zeitschrift für Aszese und Mystik
Zsch. f. Anat. u. Entwickgesch. Zeitschrift für Anatomie und Entwicklungsgeschichte
Zsch. f. angew. Psychol. Zeitschrift für angewandte Psychologie
Zsch. f. d. ges. Neur. u. Psychiat. Zeitschrift für die gesamte Neurologie und Psychiatrie
Zsch. f. Kinderforsch. Zeitschrift für Kinderforschung
Zsch. f. krit. Okkult. u. Grenzfr. d. Seelenlebens. Zeitschrift für kritischen Okkultismus und Grenzfragen des Seelenlebens
Zsch. f. Morphol. u. Oekol. d. Tiere. Zeitschrift für Morphologie und Oekologie der Tiere
Zsch. f. Menschenk. Zeitschrift für Menschenkunde
Zsch. f. päd. Psychol. Zeitschrift für pädagogische Psychologie und experimentelle Pädagogik
Zsch. f. Parapsychol. Zeitschrift für Parapsychologie
Zsch. f. Religionspsychol. Zeitschrift für Religionspsychologie
Zsch. f. Sex.-wiss. Zeitschrift für Sexualwissenschaft
Zsch. f. Sinnesphysiol. Zeitschrift für Sinnesphysiologie. (Zeitschrift für Psychologie und Physiologie der Sinnesorgane: II Abt.)
Zsch. f. system Theologie. Zeitschrift für systematische Theologie
Zsch. f. vergl. Physiol. Zeitschrift für vergleichende Physiologie
Zsch. f. Völkerpsychol. u. Soziol. Zeitschrift für Völkerpsychologie und Soziologie
Zsch. f. Theol. u. Kirche, neue Folge. Zeitschrift für Theologie und Kirche, neue Folge

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